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MAMMALIA

COMPILED BY

R. W. HAYMAN, F.Z.S.

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45.—Ames, R. G. and **van Dyke,** H. B. Antidiuretic hormone in the urine and pituitary of the Kangaroo Rat. Proc. Soc. exp. Biol. **75** 1950 pp. 417–420.

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58.—Anthony, J. and **Saban,** R. Le point central de la rotation occipitale dans la série des Mammifères. C.R. Acad. Sci. Paris **233** 1951 pp. 1312–1314 1 fig.

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64.—Arambourg, C., **Kikoine,** J. and **Lavocat,** R. Découverte du genre *Moeritherium* Andrews dans le Tertiaire continental du Soudan. C.R. Acad. Sci. Paris **233** 1951 pp. 68–70 1 fig.

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67.—Ashton, E. H. The endocranial capacities of the Australopithecinae. Proc. zool. Soc. Lond. **120** 1951 pp. 715–721.

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81.—Aubry, J., **Hatt,** P. and **Porcheron,** P. Toxicité de l'alpha naphtyl thiourée (Antu) à l'égard du campagnol des champs, *Microtus arvalis* Pallas. Ann. Epiphyt. **2** 1951 pp. 402–403.

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125.—Bartholomew, G. A. Jr. Spring, summer and fall censuses of the Pinnipeds on San Nicolas Island, California. J. Mammal. **32** 1951 pp. 15–21 1 pl.

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128.—Bartholomew, J. Hedgehog in Skye. Scot. Nat. **63** 1951 p. 199.

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130.—Bashanov, V. S. [Mammals in] Izvest. Kazakstan Branch Acad. Sci. U.S.S.R. 1942, Alma-Ater 1943 p. 53. [N.V.]

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134.—Bate, D. M. A. The Mammals from Singa and Abu Hugar, pp. 1–28 10 figs. In Fossil Mammals of Africa. No. 2. The Pleistocene Fauna of Two Blue Nile Sites. Brit. Mus. (Nat. Hist.) 1951.

Bathard, A. H. *vide* Barnett.

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Bavay, J. de *vide* Pearson.

Baxter, J. L. *vide* Collyer.

138.—Beatty, H. A note on the behavior of the Chimpanzee. J. Mammal. **32** 1951 p. 118.

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140.—Beatty, R. A. and **Fischberg,** M. Heteroploidy in mammals. I. Spontaneous heteroploidy in pre-implantation mouse eggs. J. Genet. **50** 2 1951 pp. 345–359 2 pls. tables.

141.—Beatty, R. A. and **Fischberg,** M. Cell number in haploid, diploid and polyploid mouse embryos. J. exp. Biol. **28** 4 1951 pp. 541–552 1 fig.

Beatty, R. A. *vide* Fischberg.

142.—Beccari, N. Relievi sull' esistenza nei mammiferi di un nervo terminale. Monit. zool. ital. **59** Suppl. 1951 pp. 106–110 3 figs.

143.—Becker, K. Zur Frage: Rudelbildung and Revierabgrenzung bei der Wanderatte. Z. Hyg. Zool. München **39** 3 1951 pp. 81–91.

144.—Beckers, J., **Cuvelier,** J. and **Milan,** J. Le renard. Nat. Belges **32** 1951 pp. 66–72 1 fig.

145.—Bedford, Duke of. European Bison. Zoo Life, Lond. **6** 1951 pp. 8–9 2 figs.

146.—Bedford, Duke of. Père David's Deer: the history of the Woburn Herd. Proc. Zool. Soc. Lond. **121** 1951 pp. 327–333.

147.—Bedford, Duke of. The reindeer experiment. Country Life, Lond. **110** 1951 p. 1805.

148.—Bedford, Duke of. Twin red deer calves. Field, Lond. **198** 1951 p. 381.

149.—Bedford, Duke of. Reindeer in Scotland. Field, Lond. **197** 1951 p. 476.

150.—Bee, J. W. and **Hall,** E. R. An instance of Coyote-dog hybridization. Trans. Kansas Acad. Sci. **54** 1951 pp. 73–77 4 figs.

151.—Beer, J. R. and **Meyer,** R. K. Seasonal changes in the endocrine organs and behavior patterns of the Muskrat. J. Mammal. **32** 1951 pp. 173–191.

152.—Behle, W. H. and **Hansen,** R. M. Notes on the Short-tailed Weasel in Utah. J. Mammal **32** 1951 pp. 226–227.

153.—Bejdl, W. Der Einfluss des Ultraschalls auf das Glycogen der Leberzelle und auf die Kupfferschen Sternzellen. Acta Anat. **11** 1951 pp. 444–460 4 figs.

154.—[**Belaev**, D. K., **Pereldik**, N. S. and **Portnova**, N. T.] [Experimental reduced gestation in *Martes zibellina* L.] J. Gen. Biol. Moscow **12** 1951 pp. 260–265. [In Russian.]

Bell, F. R. *vide* Amoroso.

Bels, L. *vide* Sluiter.

155.—**Bemmel**, A. C. V. van. Some additions to a revision of the Rusine deer in the Indo-Australian Archipelago. Treubia **21** 1951 pp. 105–110 1 fig.

156.—**Benz**, F., **Schuler**, W. and **Wettstein**, A. Adrenocorticotropic hormone in the pituitary gland of the whale. Nature, Lond. **167** 1951 pp. 691–692.

Bergersen, B. *vide* Jahn.

157. — **Bergounioux**, F. - M., **Zbyszewski**, G. and **Crouzel**, F. Les Mastodontes des sables miocènes de Lisbonne. C.R. Acad. Sci. Paris **232** 1951 pp. 255–256.

158. — **Bergounioux**, F. - M., **Zbyszewski**, G. and **Crouzel**, F. Les genres *Serridentinus* et *Protanancus* des sables miocènes de Lisbonne. C.R. Acad. Sci. Paris **232** 1951 pp. 428–429.

159.—**Berlin**, H. Ett nytt fynd av Sowerbys näbbwal, *Mesoplodon bidens* (Sowerby), vid skånska kusten. Fauna och flora **1951** pp. 1–10 3 figs.

160.—**Bertalanffy**, L. von and **Pitozynski**, W. J. Tissue respiration and body size. Science **114** 1951 p. 307.

161.—**Bertin**, L. La vie des animaux. 2 Paris (Libraire Larousse) 1950 pp. 213–487, figs.

162.—**Best**, G. A. Unusual bison horns. Field, Lond. **198** 1951 p. 190 1 fig.

163.—**Betz**, H. Contribution à l'étude de la dégénérescence et de la régénération musculaires. II. — Influence de la choline et du degré d'ischémie dans la transformation histiocytaire des muscles striés. Arch. Anat. micr. Morph. exp. **40** 1951 pp. 114–158 15 figs.

164.—**Bevan**, W. Jr., **Bloom**, W. L. and **Lewis**, G. T. Levels of Aggressiveness in Normal and Amino Acid-deficient Albino Rats. Physiol. Zoöl. **24** 1951 pp. 231–237 1 tab.

165.—**Beyerlein**, L., **Hillemann**, H. H. and **van Arsdel**, W. C. Ossification and calcification from postnatal day eight to the adult condition in the golden hamster. (*Cricetus auratus*.) Anat. Rec. **111** 1951 pp. 49–65 9 figs.

166.—**Bhaskar**, S. N. and others. The skull and the dentition of screw tail mice. Anat. Rec. **110** 1951 pp. 199–229 6 pls.

167.—**Bielański**, W. Characteristics of the semen of stallions. Macro- and microscopic investigations with estimation of fertility. Mém. Acad. Sci. Cracovie No. 16 1951 pp. 1–59 2 figs.

168.—**Bierens de Haan**, J. A. Discrimination of musical tempi by a young chimpanzee. Arch. néerl. Zool. **8** 1951 pp. 393–399 2 figs.

169.—**Bigalke**, R. Notes on zebras. The Cape mountain Zebra (*Equus zebra zebra*). Oryx **1** 1951 pp. 190–191.

170.—**Bigalke**, R. and **Kock**, E. de. The conservation and control of wild life in South Africa. Afr. Region. Sci. Conf. **1949** 2 [1950] pp. 211–222.

Biggar, W. S. *vide* Donald.

171.—**Billingham**, R. E. and **Medawar**, P. B. The technique of free skin grafting in mammals. J. exper. Biol. **28** 1951 pp. 385–402 3 pls. 1 fig.

Billingham, R. E. *vide* Anderson.

172.—**Bini**, G. Cattura di un rarissimo cetaceo al largo di Iquique (Cile). Boll. Pesca Piscic. Idrobiol. **27** 1951 pp. 5–13 4 figs.

173.—**Bini**, G. Osservazioni su alcuni mammiferi marini sulle coste del Cile e del Peru. Boll. Pesca Piscic. Idrobiol. **27** 1951 pp. 79–93 14 figs.

174.—**Bird**, P. F. The U.B.S.S. bat ringing scheme. Proc. Spel. Soc. Univ. Bristol **6** 1951 pp. 205–207.

175.—**B.**, L. Birds and rodents in relation to agriculture. Nature, Lond. **167** 1951 pp. 717–719.

176.—**Blackstad**, T., **Brodal**, A. and **Walberg**, F. Some observations on normal and degenerating terminal boutons in the inferior olive of the cat. Acta Anat. **11** 1951 pp. 461–477 8 figs.

Blagosklonov, K. N. *vide* Borodulina.

177.—Blair, W. F. Population structure, social behavior, and environmental relations in a natural population of the Beach Mouse (*Peromyscus polionotus leucocephalus*). Contr. Lab. Vertebr. Biol. Univ. Mich. 48 1951 pp. 1–47 1 fig. 9 tabs.

178.—Blair, W. F. Interbreeding of natural populations of vertebrates. Amer. Nat. **85** 1951 pp. 9–30.

179.—Blair, W. F. Evolutionary significance of geographic variation in population density. Texas J. Sci. **1** 1951 pp. 55–57.

180.—Blanc, G. and **Delage,** B. Sensibilité de l'écureuil de Getule (*Atlantoxerus getulus* L.) à la leptospirose hémorragique. C.R. Soc. Biol. Paris **144** 1951 pp. 1632–1633.

181.—Blancou, L. Notes sur les mammiferes de l'equateur africain français. L'éléphant nain, pp. 84–91. Le Gorille, pp. 143–151 1 pl. Mammalia, Paris **15** 1951.

182.—Blancou, L. La protection de la faune sauvage en Afrique Equatoriale Française. Mammalia, Paris **15** 1951 pp. 157–169.

Blandau, R. J. *vide* Odor.

Bloom, W. L. *vide* Bevan.

Bloomfield, A. *vide* Burton, R. W.

183.—Boë, F., Holtermann, H., **Salvesen,** S., **Stöa,** K. F. and **Sverdrup,** A. Adrenocorticotropic hormone in the whale. Nature, Lond. **167** 1951 p. 280.

184.—Boer, H. de. De edelmarter. Levende natuur **54** 1951 pp. 29–33.

185.—Boettger, C. R. Notizen zur Verbreitung und über die Verwandtschaftsbeziehungen der Möncherobbe (*Monachus albiventer* Boddaert). Zool. Anz. **147** 1951 pp. 303–310.

186.—Bohlin, B. Some mammalian remains from Shih-ehr-ma-Ch'eng, Hui-hui-p'u area, Western Kansu. Rep. Sci. Exped. N.-W. Provs. China No. 35 1951 pp. 1–47 7 pls. 83 figs.

187.—Bohmann, L. Eine neue *Zelotomys* von Kilimandjaro (Ergebnis der Ostafrikareise 1937, Uthmöller-Bohmann XI). Zool. Anz. **145** Erganzungsb. 1950 pp. 68–70 1 fig.

Bohmann, L. *vide* Niethammer.

188.—Bolliger, A. and **Gross,** R. Phenols in hair with particular reference to certain marsupials. Aust. J. Sci. **13** 1951 pp. 148–149.

189.—Bolonyi, F. Etude sur la vascularisation du lobe frontal au point de vue phylogénétique. Acta anat. **12** 1951 pp. 110–134 22 figs.

190.—Bonner, J. T. The horn of the Unicorn. Scient. Amer. **184** 1951 pp. 42–43 1 fig.

191.—Bonnot, P. The sea lions, seals and sea otter of the California coast. Calif. Fish Game **37** 1951 pp. 371–389 11 figs.

Boost, C. *vide* Ludwig.

192.—Booth, E. S. How to know the mammals (Dubuque, Iowa) 1949 pp. 206 415 figs. [N.V. Review J. Mammal. **32** 1951 pp. 474–475.]

193.—[Borissiak, A. A. and **Bekiaeva,** E. I.] [Occurrence of Tertiary land mammals in Russian territories.] Trud. Inst. Pal. Acad. Sci. U.S.S.R. **15** (3) 1948 pp. 1–116 figs. [N.V.]

194.—[Borodin, L. P.] [Role of spring floods in mammalian ecology.] Zool. J. Moscow **30** 1951 pp. 607–615. [In Russian.]

195.—[Borodulina, T. L. and **Blagosklonov,** K. N.] [Contribution to the biology of *Pteromys volans*.] Bull. Soc. Nat. Moscow **56** 6 1951 pp. 18–24 6 figs. [In Russian.]

196.—[Boryatchok-Nizhnik, G. V.] [Experiments on vegetative hybridization in animals.] J. Gen. Biol. Moscow **12** 1951 pp. 233–251 9 figs. [In Russian.]

197.—Boschma, H. Remarques sur les Cétacés à dents, et en particulier sur le Cachalot. Bull. Inst. océanogr. Monaco No. 991 1951 pp. 1–28 1 pl. 11 figs.

198.—Boschma, H. Some smaller whales. Endeavour **10** 39 1951 pp. 131–135 2 pls.

199.—Boschma, H. Faunistische mededeling. Levende natuur **54** 1951 pp. 51–55 4 figs.

200.—Boschma, H. Rows of small teeth in ziphioid whales. Zool. Meded. **31** 1951 pp. 139–148 1 pl.

201.—Boswell, K. On the 'thorn' or 'claw' in panthers' tails. J. Bombay nat. Hist. Soc. **49** 1951 pp. 776–777 3 figs.

202.—Bouchud, J. Les traits distinctifs de *Vulpes vulgaris* et de *Vulpes lagopus*. Mammalia, Paris **15** 1951 pp. 92–102 8 figs.

203.—Bouchud, J. Etude paleontologique de la faune d'Isturitz. Mammalia, Paris **15** 1951 pp. 184–203 3 figs.

Bouman, M. *vide* Sluiter.

204.—Bourlière, F. Vie et moeurs des mammifères — locomotion — alimentation — abri — protection — reproduction — migrations — vie sociale — ecologie. Paris 1951 pp. 250 69 figs. 8 pls.

205.—Bourret, R. Une nouvelle Chauve-souris du Tonkin, *Rhinomegalophus paradoxolophus*. Bull. Mus. Hist. nat. Paris (2) **23** 1951 pp. 607–609 1 fig.

Bourne, G. H. *vide* Baradi.

206.—Bouveignes, O. de. Ce que les anciens savaient du Lamantin. Zooleo N.S. No. 9 1951 pp. 25–32 4 figs.

207.—Bowen, J. E. Freak roebuck. Field, Lond. **197** 1951 p. 242 1 fig.

208.—Bowles, D. The range of grey squirrels. Field, Lond. **198** 1951 p. 1028.

Bowman, H. R. *vide* Svihla.

209.—Brambell, F. W. R. and others. The route by which antibodies enter the circulation after injection of immune serum into the exocoel of foetal rabbits. Proc. roy. Soc. **138B** 1951 pp. 188–195.

210.—Brambell, F. W. R. and others. The accumulation of antibodies in the stomach contents of foetal rabbits. Proc. roy. Soc. **138B** 1951 pp. 195–204.

211.—Brand, D. Red squirrel damage to timber. Scott. For. **5** 1951 pp. 89–90 1 fig.

212.—Brander, T. Bidrag till kannedomen om bisamråttans (*Ondatra z. zibethica* L.) kägelbobyggen. Memor. Soc. Fauna Flora fenn. **26** 1951 pp. 32–37 1 pl.

213.—Brander, T. Tre studier över bisamråttan (*Ondatra z. zibethica* L.). Acta Soc. Fauna Flora fenn. **67** 3 1951 pp. 1–52 2 pls. 8 figs.

214.—Brandt, M. Über den Biber in Ostbaltikum und den Angrenzenden Gebieten. Korresp. Bl. Naturf. Ver. Riga **64** 1942 pp. 69–75 4 pls. 2 maps.

215.—Bridges, W. There's Still a Chance for the Wisent. Anim. Kingd. **54** 1951 pp. 77–79 2 figs.

216.—Brightwell, L. R. House to house at the Zoo: Camels. Zoo Life, Lond. **6** 1951 pp. 56–57 1 fig.

Brinck, P. *vide* Gislen.

217.—Brinkmann, M. Über die Zieselkolonien in Oberschlesien. Bonn. zool. Beitr. **2** 1951 pp. 191–216 17 figs. 1 chart.

218.—Broadbrooks, H. E. Bat pursues Nighthawk. Murrelet **32** 1951 p. 45.

219.—Brock, L. G., **Eccles,** J. C. and **Rall,** W. Experimental investigations on the afferent fibres in muscle nerves. Proc. roy. Soc. **138B** 1951 pp. 453–475 6 figs.

Brodal, A. *vide* Blackstad.

220.—Brodar, S. Palevlitski sledovi v postojnski jami. Razpr. Slov. Akad. Znan. Umetn. Class. IV. Hist. nat. med. **1** 1951 pp. 243–284 4 figs. [English summary.]

221.—Brolin, S. E. The possibilities of analyzing experimental inducement of acute thymus involution. Acta Anat. **11** 1951 pp. 586–598 4 figs. 1 tab.

222.—Bronowski, J. and **Long,** W. M. Statistical methods in anthropology. Nature, Lond. **168** 1951 p. 794.

223.—Broom, R. and **Robinson,** J. T. Eruption of the permanent teeth in the South African ape-man. Nature, Lond. **167** 1951 p. 443.

224.—Brosset, A. Contribution à l'étude des pipistrelles communes (*Pipistrellus pipistrellus* Schreber) et des pipistrelles de Kuhl (*Pipistrellus kuhli* Natterer) dans l'ouest de la France. Mammalia, Paris **15** 1951 pp. 152–156.

Broun, E. *vide* Hauschka.

225.—Brown, F. R. Why they turn white. Field, Lond. **197** 1951 p. 561.

226.—Bruce, L. W. and **Shorland,** F. B. Distribution of the fatty acids in the liver lipids of the horse. Nature, Lond. **167** 1951 pp. 236–237.

227.—Brumwell, M. J. An ecological survey of the Fort Leavenworth Military Reservation. Amer. Midl. Nat. **45** 1951 pp. 187–231.

228.—Brunner, G. Das Helmloch bei Etzelwang (Obpf.). Z. deutsch. Geol. Ges. **92** 1940 pp. 499–528 8 figs.

229.—Brunner, G. Die "Kleine Teufelshöhle" bei Pottenstein (Oberfranken). Ein Faunenprofil vom Mindel-Riss-Interglazial bis zum Spätz-Magdalénien. Abh. bayer. Akad. Wiss. Math.-nat. Kl. N.F. No. 60 1951 pp. 1–46 12 figs. tables.

230.—Brütt, E. Beobachtungen am Siebenschläfer (*Glis glis* L.) in Osterwald. Beitr. Naturk. Niedersachs. **4** 1 1951 pp. 15–16.

231.—Budker, P. L'industrie baleinière au Gabon. Bull. Soc. zool. Fr. **76** 1951 pp. 271–276 2 pls.

232.—Bueker, E. D. and **Meyers, C. E.** The maturity of peripheral nerves at the time of injury as a factor in nerve regeneration. Anat. Rec. **109** 1951 pp. 723–743 11 figs.

Bullier, P. *vide* Urbain.

233.—Bullough, W. S. Vertebrate sexual cycles, London (Methuen & Co.) 1951 pp. viii + 117 12 figs.

234.—Bullough, W. S. and **Johnson, M.** The energy relations of mitotic activity in adult mouse epidermis. Proc. roy. Soc. **138B** 1951 pp. 562–575.

235.—Bullough, W. S. and **Pasteels, J.** Deoxyribosenucleic acid synthesis during cell division in mouse epidermis. Nature, Lond. **168** 1951 p. 608.

236.—Burgess, P. F. A possible record of the Javan or Lesser One-horned Rhinoceros in Malaya. Malayan Nature J. **5** 3 1951 p. 163.

237.—Burkl, W. Untersuchungen über die Pylorus- und Duodenaldrüsen. Z. mikr-anat. Forsch. **56** 1951 pp. 327–414 25 figs.

238.—Burkl, W. Über Pylorusdrüsen und Duodenaldrüsen der Säugetiere. Verh. anat. Ges. Jena **48** 1951 pp. 195–199.

239.—Burks, A. J. South American rodents live in facts and lore. Frontiers **16** 1951 pp. 40–41 1 fig.

240.—Burns, R. K. Sex transformation in the opossum: Some new results and a retrospect. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 467–483 5 figs.

241.—Burr, J. H. Jr. & **Davies, J. I.** The vascular system of the rabbit ovary and its relationship to ovulation. Anat. Rec. **111** 1951 pp. 273–297 10 figs.

242.—Burr, M. Elusive roan antelope. Field, Lond. **198** 1951 p. 949.

243.—Burton, M. The Story of Animal Life. 2 vols. ill. London 1949 (Elsevier). Mamm. vol. 2 pp. 225–392 97 figs.

244.—Burton, M. Hyrax: a natural odd-man-out. Ill. Lond. News **218** 1951 p. 58 2 figs.

245.—Burton, M. The largest animal in the world. Ill. Lond. News **218** 1951 pp. 102–103 2 pls.

246.—Burton, M. Animals in decline: 1: the musk-ox. Ill. Lond. News **218** 1951 p. 108 2 figs.

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248.—Burton, M. Animals in decline: 3: Steller's sea-cow. Ill. Lond. News **218** 1951 p. 178 2 figs.

249.—Burton, M. Animals in decline: 4: Beavers. Ill. Lond. News **218** 1951 p. 220 2 figs.

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263.—Burton, M. Buffalo and bison. Ill. Lond. News **219** 1951 p. 1078 2 figs.

264.—Burton, R. W. Game sanctuaries in Burma (pre-1942) with present status of Rhinoceros and Thamin. J. Bombay nat. Hist. Soc. **49** 1951 pp. 729–737 2 pls.

265.—Burton, R. W. Wild life reserves in India: Uttar Pradesh. J. Bombay nat. Hist. Soc. **49** 1951 pp. 749–754.

266.—Burton, R. W. Obituary. Brigadier-General Reginald George Burton. J. Bombay nat. Hist. Soc. **49** 1951 pp. 763–764.

267.—Burton, R. W. Rabies in the panther; two proved instances. J. Bombay nat. Hist. Soc. **49** 1951 p. 774.

268.—Burton, R. W. Bibliography of big game hunting and shooting in India and the East. J. Bombay nat. Hist. Soc. **50** 1951 pp. 167–169.

269.—Burton, R. W. The doings and destruction of the most murderous rogue. By **Bloomfield,** A. J. Bombay nat. Hist. Soc. **50** 1951 pp. 399–400.

270.—Burton, R. W. What is the best means of control and destruction of Flying Foxes (*Pteropus giganteus* (Brünn)). J. Bombay nat. Hist. Soc. **50** 1951 pp. 401–403.

271.—Butcher, E. O. Development of the pilary system and the replacement of hair in mammals. Ann. N.Y. Acad. Sci. **53** 1951 pp. 508–516 16 figs.

Butcher, E. O. *vide* Taylor.

272.—Butler, L. Population cycles and color phase genetics of the colored fox in Quebec. Canad. J. Zool. **29** 1951 pp. 24–41 6 figs. 3 tabs.

273.—Butler, R. A wild goat of Crete. Field, Lond. **197** 1951 p. 128 1 fig.

274.—Buxton, A. Roe deer and their rings. Country Life **109** 1951 p. 408.

275.—Buxton, A. Roe deer in Epping Forest. Country Life **109** 1951 p. 558.

276.—Buxton, A. Reindeer experiment in Scotland. Country Life **110** 1951 p. 1637.

277.—Buxton, A. Behaviour of roe deer. Country Life **110** 1951 pp. 2034, 2036.

278.—Buxton, A. P. Further observations of the night-resting habits of monkeys in a small area on the edge of the Semliki Forest, Uganda. J. Anim. Ecol. **20** 1951 pp. 31–32 1 tab.

Buxton, A. P. *vide* Lumsden.

279.—[Buyakovitch, N. G.] [*Ondatra* at the north-east border of the Soviet Union.] Zool. J. Moscow **30** 1951 pp. 279–285 1 map. [In Russian.]

280.—Cade, T. Carnivorous Ground Squirrels on St. Lawrence Island, Alaska. J. Mammal. **32** 1951 pp. 358–360.

281.—Cadeo, G. C. Ricerche paleontologiche e preistoriche al Buco del Quai (30 lo.) ad Iseo (Brescia). Atti Soc. ital. Sci. nat. **90** 1 1951 pp. 34–37.

Cagianut, B. *vide* Tondury.

282.—Cahalane, V. H. A program for restoring extirpated mammals in the National Park system. J. Mammal. **32** 1951 pp. 207–210.

283.—Caldwell, K. A new game law for Kenya. Field, Lond. **198** 1951 p. 103 3 figs.

284.—Caldwell, K. Report on a visit to East Africa. Oryx **1** 1951 pp. 173–187.

285.—Callery, R. Development of the os genitale in the Golden Hamster, *Mesocricetus* (*Cricetus*) *auratus*. J. Mammal. **32** 1951 pp. 204–207 1 fig.

286.—Cameron, A. W. Greenland Right Whale recorded in Gaspé County, Quebec. Bull. nat. Mus. Can. No. 123 1951 pp. 116–119 3 figs.

287.—Cameron, A. W. and **Morris,** W. A. The mammals of the Lake Mistassini and Lake Albanel regions, Quebec. Bull. nat. Mus. Can. No. 123 1951 pp. 120–130.

288.—Cameron, G. R. and **Cheng,** K.-K. Failure of oral D.D.T. to induce toxic changes in Rats. Brit. med. J. No. 4735 1951 pp. 819–821.

289.—Campbell, B. The harvest mouse. Field, Lond. **197** 1951 p. 958 1 fig.

290.—Campbell, D. H. Studies on immunological phenomena in Arctic mammals. Bull. nat. Res. Coun., Wash. No. 122 1951 p. 87.

291.—Campenhout, E. van. Organites épithélio-neuraux dans l'ovaire des Primates. C.R. Soc. Biol. Paris **145** 1951 pp. 454–456.

292.—Campenhout, E. van. Contribution des placodes épiblastiques au developpement des ganglions des nerfs crâniens chez *Tarsius*. Arch. Biol. Paris **62** 1951 pp. 379–389 1 pl.

293.—Cansdale, G. S. West African Dormice. Nigerian Field **16** 1951 pp. 46–47.

294.—Cansdale, G. S. Squirrel populations. Field, Lond. **198** 1951 p. 428.

295.—Cantuel, P. *Myotis nattereri* Kuhl dans le Cantal. Mammalia, Paris **15** 1951 pp. 210–211.

Cappellino, A. A. *vide* Cicardo.

296.—Carl, G. C., **Guiguet,** C. J. & **Hardy,** G. A. Biology of the Scott Island group, British Columbia. Rep. Prov. Mus. nat. Hist. Anthrop. Victoria, B.C. **1950** 1951 pp. B21–B63 17 figs.

Carpenter, M. B. *vide* Harman.

297.—Carter, T. C. The position of fidget in linkage group V of the house mouse. J. Genet. **50** 1951 pp. 264–267 tables.

298.—Carter, T. C. Wavy-coated mice: phenotypic interactions and linkage tests between rex and (a) waved-1, (b) waved-(2). J. Genet. **50** 1951 pp. 268–276 1 pl. tables.

299.—Carter, T. C. The genetics of luxate mice. I. Morphological abnormalities of heterozygotes and homozygotes II. Linkage and independence. J. Genet. **50** 1951 pp. 277–306 1 pl. 12 figs. tables.

300.—Carter, T. C. and **Falconer,** D. S. Stocks for detecting linkage in the mouse, and the theory of their design. J. Genet. **50** 1951 pp. 307–323 3 figs. tables.

301.—Carvalho, J. C. de. Relações entre os Indios do Alto Xingu e a fauna regional. Publ. avuls. Mus. nac. Rio de J. No. 7 1951 pp. 1–32 10 pls.

302.—Carvalho, J. C. M. and **Kloss,** G. R. Sôbre a alimentação do tamandua-bandeira (" *Myrmecophaga tridactyla* " L., 1758). Rev. Brasil. Biol. **11** 1951 pp. 37–42 2 figs.

303.—Caso, M. E. Los equinoides fosiles del Cenozoico de Mexico. Bol. Asoc. Mex. Geol. Petrol **3** 1951 pp. 57–96. [N.V.]

304.—Castellanos, A. Acotaciones al genero " Neothoracophorus " Ameghino. Rev. Asoc. Geol. Argent. **6** 1 1951 pp. 62–82 6 figs.

305.—Castellanos, A. Un nuevo genero de Esclerocaliptino (" Isolinia ") descubierto en el Araucaniano del valle de Los Reartes (Sierra de Cordoba). Rev. Asoc. Geol. Argent. **6** 1951 pp. 95–100 1 fig.

306.—Castle, W. E. Variation in the hooded pattern of rats, and a new allelc of hooded. Genetics **36** 1951 pp. 254–266 8 figs.

307.—Castle, W. E. Dominant and recessive black in mammals. J. Hered. **42** 1951 pp. 48–49.

308.—Castle, W. E. and **King,** F. L. New evidence on the genetics of the Palomino horse. J. Hered. **42** 1951 pp. 60–64 8 figs.

Caswell, H. H. Jr. *vide* Bartholomew.

309.—Catel, W. Aus der Jugendentwicklung einer künstlich aufgezogenen Schimpansin. II. Anatomische und physiologische Befunde während der ersten 10 Lebensmonate mit vergleichen den Hinweisen auf entsprechende Verhältnisse beim menschlichen Säugling. Zool. Gart. Lpz. (N.F.) **18** 1951 pp. 19–47 4 pls. 30 figs.

310.—Caubère, B. Intéressantes captures de chiroptères dans la Sarthe. Feuille Nat. N.S. **6** 1951 pp. 37–39.

311.—Cave, R. G. A record boar ? Field, Lond. **197** 1951 p. 518.

312.—Chang, M. C. Effects of blood serum and seminal plasma on the mammalian spermatozoa and eggs. Union. Internat. Sci. biol. Paris Sér. B (Colloques) No. 3 1949 pp. 23–25.

313.—Chang, M. C. Fertilizing capacity of spermatozoa deposited into the Fallopian tubes. Nature, Lond. **168** 1951 pp. 697–698.

314.—Chang, M. C. and **Pincus,** C. Physiology of fertilisation in mammals. Physiol. Rev. **31** 1 1951 pp. 1–26.

315.—Chape, Grey Swimming squirrels. Field, Lond. **198** 1951 p. 114.

316.—Chaplin, W. A. Sharpening or blunting ? Field, Lond. **108** 1951 p. 552 **1** fig.

317.—Chapman, A. O. The estrous cycle in the Woodrat, *Neotoma floridana*. Univ. Kansas Sci. Bull. **34** 1 1951 pp. 267–283.

Chapman, K. E. *vide* Kent.

318.—Chappell, W. M., **Durham,** J. W. and **Savage,** D. E. Mold of a rhinoceros in basalt, Lower Grand Coulee, Washington. Bull. Geol. Soc. Amer. **62** 1951 pp. 907–918 2 pls. 4 figs.

319.—Chari, V. K. The Great Indian Rorqual or Fin-Whale *Balaenoptera indica* Blyth off Umargam (Bombay State). J. Bombay nat. Hist. Soc. **50** 1951 p. 167.

Charipper, H. A. *vide* Jewell.

320.—Chase, H. B. Inheritance of polydactyly in the mouse. Genetics **36** 1951 pp. 697–710 2 figs.

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322.—Chavez Chaparro, J. Distribucion geografica de los principales mamiferos peruanos. Rev. Univ. (Cuzco) 39 (99) 1950 pp. 233–321. [N.V.]

Cheney, P. W. *vide* Johnson.

Cheng, K. *vide* Cameron.

323.—Chew, R. M. The water exchanges of some small mammals. Ecol. Monogr. **21** 1951 pp. 215–225 5 figs.

324.—Chittleborough, R. G. and **Ealey,** E. H. M. Seal marking at Heard Island, 1949. Interim Rep. Aust. Nat. Antarct. Exped. **1** 1951 pp. 1–23 7 pls.

325.—Chitty, D. Rats, mice and agriculture. Ann. appl. Biol. **38** 1951 pp. 724–725.

Chitty, D. *vide* Leslie.

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327.—Choubert, G. Réflexions au sujet du Pliocéne continental. Notes & Mem. Serv. Carte géol. Maroc **76** 1950 pp. 13–91 1 table.

328.—Christian, J. J. The mammals of the Mazinaw Lake region of Ontario; their reproduction and population dynamics. Ann. Carneg. Mus. **31** 1951 pp. 339–386.

329.—Cicardo, V. H., **Cappellino,** A. A. and **Del Conte,** E. Inhibition of the hypophysis of the guinea pig by ultrasound waves. Nature, Lond. **168** 1951 pp. 169–170 2 figs.

330.—Cintract, R. Catalogue des échantillons types et figurés des collections de paléontologie du Muséum National d'Histoire Naturelle. Mammifères. I. (Multituberculés, Marsupiaux, Primates, Tillodontes, Carnivores et Condylarthrés.) Bull. Mus. Hist. nat. Paris (2) **22** Suppl. 1 1951 pp. 1–58.

331.—Clark, W. K. Ecological life history of the Armadillo in the eastern Edwards Plateau Region. Amer. Midl. Nat. **46** 1951 pp. 337–358 3 figs.

Clayton, R. *vide* Fraser.

332.—Cleland, K. W. The spermatogenic cycle of the guinea pig. Aust. J. sci. Res. **4B** 1951 pp. 344–369 1 pl. 10 figs.

333.—Cobb, E. H. Museum of sporting trophies ? Country Life **109** 1951 p. 1726.

334.—Cobb, E. H. Melanism and altitude. Field, Lond. **197** 1951 p. 560.

335.—Cock, E. R. Highlights of a visit to the Gorongoza Game Reserve. African Wild Life **5** 1951 pp. 30–36 2 figs. map.

336.—Cockrum, E. L. A new Pocket Mouse (genus *Perognathus*) from Kansas. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 203–206.

Colbert, E. H. *vide* Hooijer.

337.—Cole, J. and **Glees, P.** Handedness in monkeys. Experientia **7** 1951 pp. 224–226 3 figs.

338.—Cole, S. M. Man's African relatives. Discovery **12** 1951 pp. 342, 347–353 10 figs.

339.—Coleman, E. Save the seals—part II. Vict. Nat. **67** 1951 pp. 171–177.

340.—Colls, C. D. G. History of the Buffalo. Nat. Wildl. Conserv. Dig. **1** 2 1950 pp. 93–95.

341.—Collyer, R. D. and **Baxter, J. L.** Observations on pinnipeds of San Miguel Island. Calif. Fish Game **37** 1951 p. 511.

Collyer, R. D. *vide* Bartholomew.

342.—Colquhoun, A. G. C. The range of grey squirrels. Field, Lond. **198** 1951 p. 1028.

343.—Colyer, F. A rare displacement of a canine in a tiger. Proc. R. Soc. Med. **44** 1951 pp. 58–59 figs.

344.—Colyer, F. Asymmetry of the dental arch in a toque monkey (*Macoca sinica*). Proc. R. Soc. Med. **44** 1951 p. 60 1 fig.

345.—Cook, A. H. The Least Weasel in New York. J. Mammal. **32** 1951 p. 225.

346.—Cook, J. E. How two American Flying Squirrels have been raised in England. Zoo Life, Lond. **6** 1951 pp. 73–75 3 figs.

347.—Cooke, H. B. S. Dr. Robert Broom, F.R.S. S. Afr. J. Sci. **47** 1951 pp. 277–278 1 fig.

348.—Cooke, H. B. S. and **Wells, L. H.** Fossil remains from Chelmer, near Bulawayo, Southern Rhodesia. S. Afr. J. Sci. **47** 1951 pp. 205–209 3 figs.

349.—Coomber, W. F. Squirrels in Canada and Britain. Field, Lond. **197** 1951 p. 279.

350.—Cooper, M. M. Genetics and animal breeding. Vet. Rec. **63** 49 1951 pp. 811–822.

351.—Corner, G. W. The reproductive cycle of the rhesus monkey. Amer. Scientist **39** 1 1951 pp. 50–73 17 figs.

352.—Cott, H. B. The palatability of the eggs of birds: illustrated by experiments on the food preferences of the Hedgehog (*Erinaceus europaeus*). Proc. Zool. Soc. Lond. **121** 1951 pp. 1–41 1 pl. 14 figs.

353.—Cout, H. The habits of the skunk. Country Life **110** 1951 p. 909.

354.—Couto, C. de P. Peter Wilhelm Lund. Memorias sobre a paleontologica Brasileira, revistas e comentadas por Carlos de Paula Couto. Inst. Nac. Livro, Rio de Janeiro 1950 pp. 589 56 pls.

355.—Couto, C. de P. Uma especie do genero *Tetrastylus* Ameghino, 1886, em Lagoa Santa. Bol. Mus. Nac. Rio de Janeiro Geol. **15** 1951 pp. 1–16.

Couto, C. de P. *vide* Price.

356.—Couturier, M. A. J. Capacité de la boite cranienne et systematique chez *Ursus arctos* et *Rupicapra rupicapra*. Mammalia, Paris **15** 1951 pp. 73–83.

357.—Couturier, M. A. J. Les bouquetins et le Parc National du Grand Paradis depuis la dernière guerre. Terre et la Vie **98** 1951 pp. 83–91 1 pl. 1 fig. 1 map.

358.—Cowan, I. McT. A new *Microtus* from the western Arctic of Canada. J. Mammal. **32** 1951 pp. 353–354.

359.—Cowie, A. T. and others. Terminology for use in lactational physiology. Nature, Lond. **168** 1951 p. 421.

Cowles, R. B. *vide* Reeder.

360.—Cozens, A. B. The ranges of the Dwarf and Royal Antelopes. Nigerian Field **16** 1951 pp. 14–19 6 figs.

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364.—Crandall, L. S. Those "forest sprites" called Marmosets. Anim. Kingd. **54** 1951 pp. 178–184 15 photos.

Crary, D. D. *vide* Sawin.

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366.—Crosby, E. C. and **Woodburne,** R. T. The mammalian midbrain and isthmus regions. Part II. The fiber connection. C. The hypothalamo-tegumental pathways. J. comp. Neurol. **94** 1 1951 pp. 1–32 10 pls.

Crouzel, F. *vide* Bergounioux.

367.—Crowcroft, P. Keeping British Shrews in captivity. J. Mammal. **32** 1951 pp. 354–355.

368.—Crowcroft, P. Live-trapping British Shrews. J. Mammal. **32** 1951 pp. 355–356.

369.—Crusafont Pairo, M. El sistema Miocenico en la depresion española del Vallés-Penedés. Int. Geol. Congress. Rept. 18th Session (1948) 1951 11 pp. 31–41.

370.—Crusafont Pairo, M. and **Truyols Santonja,** J. Hallazgo del *Plesiodimylus chantrei* Gaillard en el Meotico del Vallés. Notas Com. Inst. Geol. Min. Esp. **22** 1951 pp. 97–126 1 pl.

371.—Crusafont Pairo, M. and **Villalta,** J. F. de. Los nuevos mamiferos del neogeno de Espana. Notas Com. Inst. Geol. Min. Esp. **22** 1951 pp. 127–151 13 figs.

372.—Cumberlege, P. F. Malayan sambar. Field, Lond. **197** 1951 pp. 641, 1001.

Cuvelier, J. *vide* Beckers.

373.—Dalcq, A. M. New descriptive and experimental data concerning the mammalian egg, principally of the rat I, IIA. Proc. K. ned. Akad. Wet. **54C** 1951 pp. 351–372 1 pl. 2 figs.

374.—Dalcq, A. M. New descriptive and experimental data concerning the mammalian egg, principally of the rat. (With a rectification of a previous interpretation.) Proc. Acad. Sci. Amst. **54C** 1951 pp. 469–479 1 pl.

375.—Dalquest, W. W. Six new mammals from the state of San Luis Potosi, Mexico. J. Wash. Acad. Sci. **41** 1951 pp. 361–364.

376.—Dalquest, W. W. Bats from the island of Trinidad. Proc. La. Acad. Sci. **14** 1951 pp. 26–33.

377.—Dalquest, W. W. Two new mammals from central Mexico. Proc. Biol. Soc. Wash. **64** 1951 pp. 105–108.

378.—Dalquest, W. W. and **Roberts,** J. H. Behavior of young Grisons in captivity. Amer. Midl. Nat. **46** 1951 pp. 359–366 2 figs.

379.—Dalquest, W. W. and **Werner,** H. J. The interscapular gland of a tropical fruit bat. Anat. Rec. **111** 1951 pp. 345–353 5 figs.

380.—Dalton, A. J., **Kahler,** H. and **Lloyd,** B. J. The structure of the free surface of a series of epithelial cell types in the mouse as revealed by the electron microscope. Anat. Rec. **111** 1951 pp. 67–77 11 figs.

381.—Dalton, M. Kenya's northernmost sanctuary. African Wild Life **5** 1951 pp. 62–66 3 figs. map.

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384.—Dart, R. A. Robert Broom—his life and work. S. Afr. J. Sci. **48** 1951 pp. 3–19 2 figs.

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387.—Davies, F., **Francis,** E. J. B. and **King,** T. S. Ventricular nerve cells in mammals. Nature, Lond. **166** 1951 p. 113.

388.—Davies, J. Nephric development in the sheep with reference to the problem of the ruminant pronephros. J. Anat. Lond. **85** 1951 pp. 6–11, 2 pls.

Davies, J. I. *vide* Burr.

389.—Davis, D. D. The baculum of the Gorilla. Fieldiana, zool. **31** 1951 pp. 645–647 1 fig.

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393.—Davis, D. E. The relation between the level of population and the prevalence of *Leptospira, Salmonella,* and *Capillaria* in Norway rats. Ecology **32** 1951 pp. 465–468.

394.—Davis, D. E. A comparison of reproductive potential of two rat populations. Ecology **32** 1951 pp. 469–475.

395.—Davis, D. E. and **Hall,** O. The Seasonal Reproductive condition of Female Norway (Brown) Rats in Baltimore, Maryland. Physiol. Zoöl. **24** 1951 pp. 9–20 9 tabs.

Davis, R. B. *vide* Petrides.

396.—Davis, W. B. Bat, *Molossus nigricans,* eaten by the Rat Snake, *Elaphe laeta.* J. Mammal. **32** 1951 p. 219.

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400.—Dawson, A. B. and **McCabe,** M. The interstitial tissue of the ovary in infantile and juvenile rats. J. Morph. **88** 1951 pp. 543–571 13 figs.

Dawson, W. R. *vide* Bartholomew.

401.—Deane, C. D. The Fox in Northern Ireland. Irish Nat. J. **10** 1950 pp. 93–94.

402.—Deane, C. D. Hare breeding beneath a hut. Irish Nat. J. **10** 1951 p. 197.

403.—de Beer, G. R. Vertebrate Zoology: an introduction to the comparative anatomy, embryology and evolution of chordate animals, London (Sidgwick & Jackson) 1951 pp. xv + 435 185 figs.

404.—Decerisy, J.-L. Les artères du bulbe et de la protubérance chez certains singes du Nouveau Monde. (Genres *Ateles, Lagothrix, Eriodes*). Bull. Mus. Hist. nat. Paris (2) **23** 1951 pp. 62–65 2 figs.

405.—Dechambre, E. A propos des evolutions convergentes et paralleles. Mammalia, Paris **15** 1951 pp. 175–183.

406.—Dechambre, E. Un chat tricolore. Mammalia, Paris **15** 1951 p. 211.

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409.—Degerbol, M. List of Danish Vertebrates, Copenhagen (Dansk Videnskabs Forlag) 1950 pp. 180 1 map. [Mammals pp. 133–150.]

410.—Dehm, R. Das jüngere Tertiär in Südbayern als Lagerstätte von Säugetieren, besonders Dinotherien. Abhandl. Neues Jahrb. Min. (B) **90** 1 1949 pp. 1–30 figs. [N.V.]

411.—Dehm, R. Zur Gliederung der jungtertiären Molasse in Suddeutschland nach Säugetieren. Monats. N. Jahrb. Geol. Pal. Stuttgart 5 1951 pp. 140–151 3 figs.

412.—Dekeyser, P. L. "Mammifères" in Contribution à l'étude de l'Air. Mém. Inst. franç. Afr. noire 10 1950 pp. 388–425. [N.V.]

413.—Dekeyser, P. L. Considérations sur les chats (*Felis libyca* Forster) de l'Afrique Occidentale. Bull. Inst. franç. Afr. noire **12** 1950 pp. 704–709 2 figs.

414.—Dekeyser, P. L. La tête osseuse chez les Chacals d'A.O.F. Bull. Inst. franç. Afr. noire **13** 1951 pp. 376–383 figs. [N.V.]

415.—Dekeyser, P. L. Note sur les premiers états de la dentition jugale chez l'éléphant d'Afrique, "*Loxodonta africana*" (Blumenbach). Trab. 2a Conf. int. Afr. occid. Bissau 1947 **3** 2 1951 pp. 295–304 4 figs.

416.—Dekeyser, P.-L. and **Villiers,** A. Les animaux protégés de l'Afrique noire. Initiations africaines V. Ifan Dakar 1951 128 pp. 57 figs. [N.V.]

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418.—Dekeyser, P. L. and **Villiers,** A. Sur les cercopithéques mones de la région de Bignona. Trab. 2a Conf. int. Afr. occid. Bissau 1947 **3** 2 1951 pp. 67–72 2 pls.

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Delage, B. *vide* Blanc.

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Del Conte, E. *vide* Cicardo.

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424.—Della Serra, O. Divisáo do Genero *Leontocebus* (Macacos platyrrhina) em Dois Sub-Genero sob Bases de Caracteres Dento-Morfologicos. Pap. Dep. Zool. Sec. Agric. S. Paulo **10** 1951 pp. 147–154 8 figs.

425.—Della Serra, O. and **Picosse,** M. O tuberculo intermediario posterior (metaconule) dos molares superiores nos macacos do genero *Callicebus* Thomas, 1903. Pap. Dep. Zool. Sec. Agric. S. Paulo **10** 1951 pp. 127–131 3 figs.

426.—Delost, P. Structure histologique et étude de l'activité phosphatasique alcaline du canal déférent du campagnol des champs (*Microtus arvalis* P.). État du cortex surrénal. C.R. Soc. Biol. Paris **145** 1951 pp. 373–377 8 figs.

427.—Delost, P. Variations saisonnières de l'activité thyroidienne du campagnol des champs (*Microtus arvalis*). C.R. Soc. Biol. Paris **145** 1951 pp. 377–380.

428.—Delost, P. Structure du canal déférent du campagnol des champs (*Microtus arvalis* P.) après castration. C.R. Soc. Biol. Paris **145** 1951 pp. 1775—1778 6 figs.

429.—Delost, P. Etude des ébauches mammaires d'embryons, de foetus et de nouveau-nés de Campagnol des champs (*Microtus arvalis* P.). Bull. Soc. zool. Fr. **76** 1951 pp. 143–157 3 pls.

430.—Delost, P. L'utricule prostatique des foetus et des nouveau-nés de sexe male de Campagnol des champs (*Microtus arvalis*). Bull. Soc. zool. Fr. **76** 1951 pp. 158–163 2 figs. 1 tab.

431.—Demangeot, J. Sur l'âge Villafranchien de l'ancien lac Aquilanien. R.C. Accad. Lincei (8) **10** 1951 pp. 55–57 1 fig.

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433E.—Deraniyagala, P. E. P. A new genus and species of hornless Mio-Pliocene Rhinoceros. Proc. 7th Ann. Congress Ceylon Ass. Sci. **2** 1951 p. 24. [N.V.]

433F.—Deraniyagala, P. E. P. Proc. 7th Ann. Sess. Ceylon Ass. Sci. **2** 1951 pp. 23–25. [N.V.]

434.—de Vos, A. Peak populations of *Peromyscus maniculatus gracilis* in northern Ontario. J. Mammal. **32** 1951 p. 462.

435.—de Vos, A. and **Peterson,** R. L. A review of the status of Woodland Caribou (*Rangifer caribou*) in Ontario. J. Mammal. **32** 1951 pp. 329–337 3 figs.

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438.—Dharmakumarsinhji, K. S. and **Wynter-Blyth,** M. A. The Gir Forest and its Lions. Part III. J. Bombay nat. Hist. Soc. **49** 1951 pp. 685–694.

439.—Dice, L. R. and **Howard,** W. E. Distance of dispersal by Prairie Deer-mice from birthplaces to breeding sites. Contrib. Lab. Vert. Biol. Univ. Michigan 50 1951 pp. 1–13 3 figs.

Dick, G. W. A. *vide* Haddow.

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442.—Didier, R. Description de l'os pénien d'*Anomalurops beecrofti hervoi* Dekeyser et Villiers. Trab. 2a Conf. int. Afr. occid. Bissau 1947 **3** 2 1951 pp. 63–65 5 figs.

443.—Dietrich, W. O. Daten zu den fossilen Elefanten Afrikas und Ursprung der Gattung *Loxodonta*. Neues Jhrb. Geol. Pal. Abhandl. **93B** 1951 pp. 325–378 14 figs.

Dirken, M. N. L. *vide* Dobben-Broekema.

444.—Dobben-Broekema, M. van and **Dirken,** M. N. L. Reactions of the vessels of the rabbit's ear in response to heating the body. Acta Physiol-Pharmarcol. Neerl. **1** 1951 pp. 562–583 8 figs.

445.—Dobben-Broekema, M. van and **Dirken,** M. N. L. Influence of the sympathetic nervous system on the circulation in the rabbit's ear. Acta Physiol-Pharmarcol. Neerl. **1** 1951 pp. 584–602 5 figs.

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Dombrovski, V. V. *vide* Naumov.

Domenjoud, C. *vide* Wautier.

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451.—Dorst, J. Étude d'une collection de Chiroptères d'Ecuador. Bull. Mus. Hist. nat. Paris (2) **23** 1951 pp. 602–606.

Dorst, J. *vide* Albisson.

452.—Doty, R. E. Warfarin (compound 42) a promising new rodenticide for cane fields. Hawaiian Planters Rec. **54** 1 1951 pp. 1–21 14 figs. tables.

Dresco, E. *vide* Balazuc.

Dubinin, V. B. *vide* Garutt.

Duckert, R. *vide* Perrottet.

453.–Ducommun-Lehmann, S. L'evolution de la graisse et du glycogène hépatiques chez la femelle gravide et l'embryon de cobaye. Acta anat. **12** 1951 pp. 286–315 4 figs.

454.—Duke, K. L. The external genitalia of the Pika, *Ochotona princeps*. J. Mammal. **32** 1951 pp. 169–173 3 pls.

Dukelskaya, I. M. *vide* Naumov.

Dunayeva, T. *vide* Olsufiev.

455.—Dunbar, J. B. Why they turn white. Field, Lond. **197** 1951 p. 396.

456.—Duncan, D. L. and **Phillipson,** A. T. The development of motor responses in the stomach of the foetal sheep. J. exp. Biol. **28** 1 1951 pp. 32–40.

457.—Dunn, L. C. and **Gluecksohn-Waelsch,** S. On the origin and genetic behaviour of a new mutation (t3) at a mutable locus in the mouse. Genetics **36** 1951 pp. 4–12.

458.—Duran-Jorda, F. The eosinophil cell as seen in the Llama. Nature, Lond. **168** 1951 p. 1129 1 fig.

Durham, J. W. *vide* Chappell.

459.—Dusi, J. L. The nest of a Short-tailed Shrew. J. Mammal. **32** 1951 p. 115.

460.—Dusi, J. L. A specimen of Bachman's Shrew from Alabama. J. Mammal. **32** 1951 p. 223.

461.—Eadie, W. R. A comparative study of the male accessory genital glands of *Neurotrichus*. J. Mammal. **32** 1951 pp. 36–43 3 figs.

Ealey, E. H. M. *vide* Chittleborough.

462.—Eayrs, J. T. The factors governing the opening of the eyes in the albino rat. J. Anat. Lond. **85** 1951 pp. 330–337.

463.—Eayrs, J. T. and **Taylor, S. H.** The effect of thyroid deficiency induced by methyl thiouracil on the maturation of the central nervous system. J. Anat. Lond. **85** 1951 pp. 350–358.

464.—Eberl-Rothe, G. Über das Gehörgansorgan von Saugetieren. Acta Anat. **11** 1951 pp. 616–664 18 figs.

465.—Eberl-Rothe, G. Über den Reissnerschen Faden der Wirbeltiere. Z. mikr.-anat. Forsch. **57** 1951 pp. 137–180 25 figs.

466.—Eccles, J. C. and **McIntyre, A. K.** Plasticity of mammalian monosynaptic reflexes. Nature, Lond. **167** 1951 pp. 466–468 1 fig.

Eccles, J. C. *vide* Brock.

467.—Eckstein, P. and **Zuckerman, S.** The laboratory monkey. J. Anim. Technic. Ass. **2** 2 1951 7 pp. 3 figs.

468.—Edwards, H. A. Rabbits: Legislation affecting agricultural and woodland owners. Quart. J. For. **45** 1951 pp. 120–122.

469.—Ehlers, P. Über Altersveranderungen an Grenzstrang-Ganglien vom Meereschweinchen. Anat. Anz. **98** 1951 pp. 24–34 2 tabs. 1 graph.

470.—Ehrenberg, K. Funde kleinwüchsiger Bären und andere Knochenfunde aus Höhlen in der Umgebung von Bad Aussee. Anz. öst. Akad. Wiss. **87** 1951 pp. 158–166.

471.—Ehrenberg, K. Berichte über Ausgrabungen in der Salzofenhöhle im Toten Gebirge. V. Erste Ergebnisse der Sichtung des Fundmateriales in der Sammlung Körber in Bad Aussee. Anz. öst. Akad. Wiss. **87** 1951 pp. 262–277 1 fig.

472.—Eibl-Eibesfeldt, I. Beobachtungen zur Fortpflanzungsbiologie und Jugendentwicklung des Eichhornchens (*Sciurus vulgaris* L.) Z. Tierpsychol. **8** 1951 pp. 370–400 38 figs.

473.—Eibl-Eibesfeldt, I. Gefangenschaftsbeobachtungen an der persischen Wüstenmaus (*Meriones persicus persicus* Blanford): Ein Beitrag zur vergleichenden Ethologie der Nager. Z. Tierpsychol. **8** 1951 pp. 400–423 16 figs.

Eisenman, G. *vide* Rudin.

474.—Eisentraut, M. Dressurversuche zur Feststellung eines optischen Orientierungsvermögens der Fledermäuse. Jhft. Ver. vaterl. Naturk. Württemberg **106** 1950 pp. 34–42 2 figs.

475.—Ekholm, R. Articular cartilage nutrition. How radioactive gold reaches the cartilage in rabbit knee joints. Acta Anat. Suppl. **15** 1951 pp. 1–76 5 figs.

476.—Elder, W. H. The baculum as an age criterion in Mink. J. Mammal. **32** 1951 pp. 43–50 2 pls. 3 figs.

477.—Ellerman, J. R. and **Morrison-Scott, T. C. S.** Checklist of Palaearctic and Indian Mammals 1758 to 1946. Brit. Mus. (Nat. Hist.) 19 Nov. 1951 pp. 810.

478.—Ellinger, F. Effects of ionizing radiation on growth and replacement of hair. Ann. N.Y. Acad. Sci. **53** 1951 pp. 682–687.

479.—Ellison, N. F. Lesser Rorqual in River Mersey. Northw. Nat. **23** 1–4 [1951] p. 156.

480.—Eloff, F. C. Observations on the chondrocranium of *Rhabdomys pumilio*. Ann. Transv. Mus. **21** 1951 pp. 369–379 3 figs.

481.—Eloff, F. C. On the organ of Jacobson and the nasal-floor cartilages in the chondrocranium of *Galago senegalensis*. Proc. zool. Soc Lond. **121** 1951 pp 651–655 8 figs.

482.—**Eloff,** G. Adaptation in Rodent Moles and Insectivorous Moles, and the theory of convergence. Nature, Lond. **168** 1951 pp. 1000–1001 2 figs.

483.—**Emlen,** H. L. Jr. and **Strecker,** R. L. The effect of laboratory confinement on survival of poisoned house mice. Ecology **32** 1951 pp. 330–331.

484.—**Enders,** R. K. Rats. Atoll Res. Bull. No. 1 1951 p. 20.

Enders, R. K. *vide* Pearson.

485.—**Engels,** W. E. Winter inactivity of some captive chipmunks (*Tamias s. striatus*) at Chapel Hill, North Carolina. Ecology **32** 1951 pp. 549–555 1 fig. tables.

486.—**Ennouchi,** E. A propos de nouvelles pièces d'Eléphants fossiles. Bull. Soc. Sci. nat. Maroc **29** 1951 pp. 89–92.

Ennouchi, E. *vide* Balloy.

487.—**Epstein,** H. A goat with heteronymous horns. J. Hered. **42** 2 1951 pp. 81–84 3 figs.

488.—**Erasmo,** G. D'. Sopra un teschio di *Bos taurus primigenius* Bojanus recentemente rinvenuto a Pignataro Interamna. R.C. Accad. Napoli (4) **17** 1950 pp. 259–262 1 fig.

489.—**Erencin,** Z. Die Cytologie der Hämal-Lymphknoten von Wiederkäuern (Schaf und Ziege). Acta Anat. **11** 1951 pp. 401–413 30 figs.

490.—**Errington,** P. L. Concerning fluctuations in populations of the prolific and widely distributed muskrat. Amer. Nat. **85** 1951 pp. 273–292.

491.—[**Ershova,** I. P. and **Falkenshtein,** B. Y.] [Role of sight in food-finding in wild rodents.] J. Gen. Biol. Moscow **12** 1951 pp. 296–299. [In Russian.]

492.—**Eshuis,** W. Jr. Voor de tweede maal: "Wordt de walvis bedreigd ?" Natuur en Landschap **5** 2 1951 pp. 59–61 1 fig. [English summary.]

493.—**Esther,** H. Kleine Beobachtungen an *Alactaga saliens* Gm. Zool. Gart. Lpz. **18** 1951 pp. 247–248.

Etherington, M. G. *vide* Speed.

494.—**Evans,** A. R. Domesticated zebras. Field, Lond. **198** 1951 p. 514.

495.—**Evans,** D. Grey squirrels in Glamorgan. Field, Lond. **198** 1951 p. 552.

496.—**Evans,** F. C. Notes on a population of the Striped Ground Squirrel (*Citellus tridecemlineatus*) in an abandoned field in southeastern Michigan. J. Mammal. **32** 1951 pp. 437–449 4 figs.

497.—**Evans,** F. C. and **Freeman,** R. B. On the relationships of some mammal fleas to their hosts. Ann. Ent. Soc. Amer. **43** 1950 pp. 320–333.

Evans, F. C. *vide* Holdenried.

498.—**Evans,** G. P. Malayan sambar. Field, Lond. **197** 1951 p. 437.

499.—**Everett,** N. B. and **Johnson,** R. J. A physiological and anatomical study of the closure of the ductus arteriosus in the dog. Anat. Rec. **110** 1951 pp. 103–111 1 pl. (5 figs.).

500.—**Ewer,** R. F. Recent researches on whales. New Biology No. 9 1951 pp. 113–118 1 fig.

501.—**Fainstat,** T. D. Hereditary differences in ability to conceive following coitus in mice. Science **114** 1951 p. 524.

502.—**Falconer,** D. S. Two new mutants, 'trembler' and 'reeler,' with neurological actions in the house mouse (*Mus musculus* L.). J. Genet. **50** 2 1951 pp. 192–201 1 fig.

503.—**Falconer,** D. S. Two congenital defects of the limb bones in the mouse. Acta anat. **13** 1951 pp. 371–378 1 fig.

504.—**Falconer,** D. S., **Fraser,** A. S. and **King,** J. W. B. The genetics and development of 'crinkled' a new mutant in the house mouse. J. Genet. **50** 2 1951 pp. 324–344 2 pls. 6 figs.

505.—**Falconer,** D. S. and **Siertsroth,** U. Dreher, ein neues Gen der Tanzmausgruppe bei der Hausmaus. Z. indukt. Abstamm.- u. VererbLehr **84** 1951 pp. 71–73.

Falconer, D. S. *vide* Carter.

Falkenshtein, B. Y. *vide* Ershova.

506.—**Featherstonhaugh,** A. H. Rhinoceroses. Malay. Nat. J. **5** 1951 pp. 191–193.

507.—**Feldman,** J. D. Endocrine control of the adrenal gland. Anat. Rec. **109** 1951 pp. 41–69 38 figs.

508.—Felten, H. Der Edel-oder Baummarder (*Martes martes*). Natur u. Volk **81** 1951 pp. 265–267 1 fig.

509.—Fernand, V. S. V. The histology of the pituitary and the adrenal glands of the dugong (*Dugong dugung*). Ceylon J. med. Sci. **8** 2 1951 pp. 57–62 2 pls.

510.—Fernand, V. S. V. and **Young,** J. Z. The sizes of the nerve fibres of muscle nerves. Proc. roy. Soc. **139B** 1951 pp. 38–58 4 figs.

Ferrero, A. *vide* Pictet.

511.—Field, E. J. The nervous component of the atrioventricular bundle. J. Anat. Lond. **85** 1951 pp. 105–113 3 pls.

512.—Findley, J. S. A record of Moose speed. J. Mammal. **32** 1951 p. 116.

513.—Findley, J. S. A tame Red Fox cub. J. Mammal. **32** 1951 p. 117.

514.—Findley, J. S. Habitat preferences of four species of *Microtus* in Jackson Hole, Wyoming. J. Mammal. **32** 1951 pp. 118–120.

515.—Fink, W. Histochemische Untersuchungen über den Vitamin C Stoffwechsel während der Entwicklung des Meerschweinchens. Z. mikr.-anat. Forsch. **57** 1951 pp. 522–570 18 figs.

516.—Firket, H. Recherches sur la régénération de la peau de Mammifère. Première Partie: Introduction et Etude Histologique (Evolution générale et analyse quantitative). Arch. Biol. Paris **62** 1951 pp. 309–334 2 pls. 6 figs.

517.—Firket, H. Recherches sur la régénération de la peau de Mammifère. Deuxième partie: Etude histochimique. Arch. Biol. Paris **62** 1951 pp. 335–351 1 pl.

518.—Fischberg, M. and **Beatty,** R. A. Spontaneous heteroploidy in mouse embryos up to mid-term. J. exp. Zool. **118** 1951 pp. 321–335 10 figs.

Fischberg, M. *vide* Beatty.

519.—Fischel, W. Gehirn, Psyche und Körpergrösse bei Säugetieren. Zool. Anz. **145** Erganzungsb. 1950 pp. 163–170.

Fischer, M. I. *vide* Mawson.

520.—Fisher, H. I. Notes on the Red Fox (*Vulpes fulva*) in Missouri. J. Mammal. **32** 1951 pp. 296–299 1 fig.

521.—Fitzsimons, V. Zoological Expedition to Inyanga, Southern Rhodesia. African Wild Life, Johannesburg **5** 1951 p. 9.

522.—Fitzsimons, V., **Lundholm,** B. and **Vincent,** J. Taxonomy and ecology of the vertebrate fauna of Africa. Afr. Region. Sci. Conf. **1949** 2 [1950] pp. 201–206 2 figs.

Fitzwater, W. D. Jr. *vide* Vogtman.

523.—Fleay, D. Trapeze artist of the tall timber. Nat. Hist. N.Y. **60** 1951 pp. 16–20 6 figs.

524.—Fleming, C. A. Sea lions as geological agents. J. Sedimentary Petrol. (Tulsa) **21** 1951 pp. 22–25. [N.V.]

525.—Fletcher, H. O. A strange extinct marsupial of great size from Queensland. Aust. Mus. Mag. **10** 1951 p. 150.

526.—Fooks, H. A. Record buffalo head ? Field, Lond. **198** 1951 p. 790 1 fig.

527.—Foran, W. R. Game preservation in Africa. Field, Lond. **197** 1951 p. 96.

528.—Foran, W. R. Melanism in African fauna. Field, Lond. **197** 1951 pp. 429–430 2 figs.

529.—Foran, W. R. Truth about buffalo. Field, Lond. **197** 1951 pp. 699–700 5 figs.

530.—Foran, W. R. Albinos in Africa. Field, Lond. **198** 1951 p. 376 2 figs.

531.—Foran, W. R. Giraffe attacks car. Field, Lond. **198** 1951 p. 382.

532.—Foran, W. R. Albinism in lions. Field, Lond. **198** 1951 p. 554.

533.—Foran, W. R. Elusive roan antelope. Field, Lond. **198** 1951 p. 634 1 fig.

Foreman, D. *vide* Anthony.

534.—Forget, J. Cheiropteres de la Grotte de Nichet. Bull. Soc. Hist. nat. Ardennes **40** 1951 p. 21.

535.—Frade, F. Algumas novidades para a faune da Guiné Portuguesa (aves e mamíferos). Ann. Jta. Invest. colon. Lisboa **4** 1949 pp. 165–186 6 pls.

Francis, E. T. B. *vide* Davies.

Francis, K. C. *vide* Mulligan.

536.—Frankenberger, Z. A contribution to the morphology and morphogenesis of the female genital organs of the Gorilla. Mém. Soc. Sci. Bohème Cl. Sci. **1948** 14 1950 pp. 1–17 4 pls. fig.

537.—Franz, V. Das Sehorgan des Schwimmbeutlers (Chironectes; Mammalia, Didelphyidae). Dtsch. Zool. Z. **1** 1951 pp. 139–141.

538.—Fraser, A. S. Competition between skin follicules in sheep. Nature, Lond. **167** 1951 pp. 202–203 1 fig.

539.—Fraser, A. S. Growth of the mouse coat. J. exp. Zool. **117** 1951 pp. 15–29 4 figs. 4 tabs.

Fraser, A. S. *vide* Falconer.

540.—Fraser, F. C. Vestigial metapodials in the Okapi and Giraffe. Proc. zool. Soc. Lond. **121** 1951 pp. 315–317 2 pls.

541.—Fraser, F. C. Skull of the foetal Narwhal. Nature, Lond. **167** 1951 p. 765.

542.—Fraser, F. C. The Specific Name of the Northern Pilot Whale or Blackfish. Ann. Mag. nat. Hist. (12) **4** 1951 pp. 942–944.

543.—Fraser, F. C. On the ' thorn ' or ' claw ' in panthers' tails. J. Bombay nat. Hist. Soc. **49** 1951 pp. 777–779 3 figs.

544.—Fraser, F. C. and **King, J. E.** Second Interim Report on the Animal Remains from Star Carr, Seamer. Proc. Prehistoric Soc. [1950] 1951 No. 9 pp. 124–129.

545.—Fraser, H. S. and **Clayton, R.** Graft compatibility of the " pink eye " gene in mice. Experientia, Basel **7** 1951 p. 65.

546.—Frechkop, S. Notes sur les Mammifères. XXXVIII.—Sur un foetus de Rhinocéros de la Sonde. Bull. Inst. Sci. nat. Belg. **27** 2 1951 pp. 1–7 4 pls.

547.—Frechkop, S. L'Oryctérope ne serait-il pas le prototype de l'incarnation de Seth-Typhon. Chron. d'Egypte 41 1946 pp. 91–92 2 figs.

Fredericson, E. *vide* Scott.

Freeman, R. B. *vide* Evans.

548.—Freund, L. Contributions to the morphology of the mammalian Medulla spinalis. I. Mém. Soc. zool. tchéosl. **14** 1950 pp. 15–26 1 pl.

549.—Freund, L. A bibliography of the mammalian order Sirenia. Mém. Soc. zool. tchéosl. **14** 1951 pp. 161–181.

550.—Friant, M. Le gisement des Pics (Saint - Yvoine, Puy - de - Dôme). Cahier Geol. Thoiry **6** 1951 pp. 49–52 3 figs.

551.—Friant, M. Sur la position systématique du grand rongeur éteint de l'île de Malte, *Leithia melitensis* Leith-Adams. Proc. zool. Soc. Lond. **121** 1951 pp. 695–701 2 figs.

552.—Friant, M. La morphologie des molaires d'un rongeur, le spermophile (*Citellus*). C.R. Acad. Sci. Paris **232** 1951 pp. 1509–1511 1 fig.

553.—Friant, M. Sur la forme du cerveau, au cours de l'ontogénie, chez les Éléphants (Elephantidae). C.R. Acad. Sci. Paris **232** 1951 pp. 2137–2138.

554.—Friant, M. La dentition temporaire, dite lactéale, de la Roussette (*Rousettus leachi* A. Sm.), Chiroptère frugivore. C.R. Acad. Sci. Paris **233** 1951 pp. 890–892 3 figs.

555.—Friant, M. and **Perry, J.** Morphologie du cerveau d'un foetus d'Éléphant (*Loxodonta africana* Blum.). C.R. Acad. Sci. Paris **232** 1951 pp. 560–562 1 fig.

556.—Friant, M. and **Reichlen, H.** Deux chiens prehispaniques du désert d'Atacama. Recherches anatomiques sur le chien des Incas. Trav. Inst. français études andines **2** 1951 pp. 1–18 3 pls. [N.V.]

557.—Friedell, R. W. and others. Electrophoretic studies on swine. II. The composition of plasma during gestation and lactation. Iowa St. Coll. J. Sci. **25** 1951 pp. 521–526 4 figs.

558.—Frings, H. Sweet taste in the cat and the taste-spectrum. Experientia **7** 1951 pp. 424–426.

559.—Frings, H. and **M.** Otitis media and audiogenic seizures in mice. Science **113** 1951 pp. 689–690.

560.—Frings, H. and **M.**, and **Kivert, A.** Behavior patterns of the laboratory mouse under auditory stress. J. Mammal. **32** 1951 pp. 60–76 2 pls. 1 fig.

561.—Frisch, O. v. Fluchtverhalten der Haselmaus (*Muscardinus avellanarius*). Z. Tierpsychol. **8** 1951 pp. 368–369.

562.—Fritz, E. Noch Bären im Trentino! Schweiz. Natursch. **16** 1950 pp. 105–106.

Fritz, E. *vide* Koby.

563.—Fuller, J. L. and **Williams,** E. Gene-controlled time constants in convulsive behavior. Proc. nat. Acad. Sci. Wash. **37** 1951 pp. 349–356.

564.—Fuller, W. A. Natural History and Economic importance of the Muskrat in the Athabasca-Peace Delta, Wood Buffalo Park. Wildl. Mgmt. Bull. Can. Ser. 1 No. 2 1951 pp. 1–82 42 figs.

565.—Fuller, W. A. Measurements and weights of northern Muskrats. J. Mammal. **32** 1951 pp. 360–362.

566.—Furlong, J. R. Production and marketing of Colonial hides and skins. Colon. Pl. anim. Prod. **1** 1950 pp. 271–283.

567.—Gaines, T. B. The failure of the rodenticide warfarin to injure oriental rat fleas when the poison is fed to the host rat. J. Parasit. **37** 5 sect. 1 1951 pp. 489–490.

568.—[Gambaryan, P. P.] [Role of the processus spinosus of the second thoracic vertebra in some rodents.] Zool. J. Moscow **30** 1951 pp. 165–171 6 figs. [In Russian.]

569.—Gardner, J. H. and **Raybuck,** H. E. Cleavage line patterns of the cat. Anat. Rec. **110** 1951 pp. 549–555 3 figs.

570.—Gardner, M. C. A list of Maryland Mammals (Part I, Marsupials and Insectivores), pp. 65–68; (Part II, Bats), pp. 111–114. Proc. biol. Soc. Wash. **63** 1950.

571.—Garnham, P. C. C. Distribution of wild-rodent plague. Bull. World Hlth. Organ. 2 1949 pp. 271–278.

572.—Garton, G. A. Observations on the distribution of inorganic phosphorus, soluble calcium and soluble magnesium in the stomach of the sheep. J. exper. Biol. **28** 1951 pp. 358–368.

573.—[Garutt, V. E.] [Changes occurring in the structure of carpus in Proboscidea in connection with habitat.] C.R. Acad. Sci. URSS N.S. **77** 1951 pp. 513–515 1 fig. [In Russian.]

574.—[Garutt, V. E. and **Dubinin,** V. B.] [The skeleton of the Taymyr mammoth.] Zool. J. Moscow **30** 1951 pp. 17–23 5 figs. [In Russian.]

575.—Gatenby, J. B. and **Leslie,** **Ellis,** J. The vertebrate neurone. The pituitary and sudan black. Cellule **54** 1951 pp. 151–162 1 pl. 14 figs.

576.—Gatenby, J. B. and **Moussa,** T. A. A. The nature of the golgi apparatus. The liver cell, and the Palade-Claude mash cytology. Cellule **54** 1951 pp. 48–64 1 pl. 6 figs.

577.—Gatz, A. J. and **Houchin,** O. B. Studies on the heart of vitamin E deficient rabbits. Anat. Rec. **110** 1951 pp. 249–265 2 pls.

578.—Gee, E. P. The Chillingham Cattle. Oryx **1** 1951 pp. 102–103 1 pl.

579.—Gee, E. P. An Indian wild-life sanctuary. Country Life **110** 1951 pp. 2168–2169 6 figs.

580.—Gee, E. P. What is the best means of control and destruction of Flying Foxes (*Pteropus giganteus* (Brunn.)). J. Bombay nat. Hist. Soc. **50** 1951 p. 401.

581.—[Genin, D. I.] [The role of great numbers of spermatozoa in the sexual process.] J. gen. Biol. **12** 1951 pp. 108–121 figs. [In Russian.]

582.—George, J. L. and **Stitt,** M. March litters of Racoons (*Procyon lotor*) in Michigan. J. Mammal. **32** 1951 p. 218.

Geptner, V. G. *vide* Heptner.

583.—Gerber, E. Über die Rinder-Reste aus den keltisch-romischen Niederlassungen der Engehalbinsel bei Bern. Rev. suisse Zool. **58** 1951 pp. 1–22.

584.—Gerichter, Ch. B. Two new lung nematodes from Near-East mammals. Parasitology **41** 1951 pp. 184–188 19 figs.

585.—Gersbacher, W. M. and **Swayne,** J. R. The Meadow Jumping Mouse in southern Illinois. J. Mammal. **32** 1951 p. 122.

586.—Gesenius, H. Genwirkungen und Umwelteinflüsse. Anat. Anz. **98** 1951 pp. 272–279 7 figs.

Ghany, M. A. *vide* Badreldin.

587.—Ghidini, G. M. Feti dé mammiferi. Miss. Biol. Sagan-Omo Roma Zool. **1** 1943 pp. 83–117 14 figs.

588.—Giban, J. Inventaire des moyens de lutte chimique contre les rongeurs. Ann. Épiphyt. **2** 1951 pp. 509–514.

Gier, H. T. *vide* Haines.

589.—Gill, E. D. New evidence from Victoria relative to the antiquity of the Australian aborigines. Aust. J. Sci. **14** 1951 pp. 69–73 2 figs.

590.—Gillan, G. Persian lions. Field, Lond. **197** 1951 p. 960.

591.—Gislén, T. and **Brinck, P.** Subterranean waters on Gotland with special regard to the Lummellunda current. II. Environmental conditions, plant and animal life, immigration problems. Acta Univ. lund. N.S. **46** 6 1950 pp. 1–82 7 figs.

Glass, B. P. *vide* Baker.

Glees, P. *vide* Cole.

592.—Glenny, F. H. Use of the scapula as a means of differentiation between the Mearns' Cotton-tail and the Australian imported and domestic Hare. Ohio J. Sci. **51** 1951 pp. 271–272 4 figs.

593.—Gluecksohn-Waelsch, S. Physiological genetics of the mouse. Adv. Genet. N.Y. **4** 1951 pp. 1–51 1 fig.

Gluecksohn-Waelsch, S. *vide* Dunn.

594.—Godet, R. La différenciation du sexe chez la taupe. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 627–633 7 figs.

595.—Godet, R. Contribution à l'éthologie de la Taupe. (*Talpa europaea* L.). Bull. Soc. zool. Fr. **76** 1951 pp. 107–128 1 pl. 6 figs.

596.—Godet, R. Morphogenèse comparée des voies génitales mâles chez les Insectivores Lipotyphla. Ann. Sci. nat. zool. (11) **13** 1951 pp. 277–289 11 figs. 1 tab.

597.—Goethe, F. Beobachtungen an einem Pferdespringer (*Alactaga saliens* Gm.). Zool. Gart., Lpz. **18** 1951 pp. 202–207 6 figs.

Goethe, F. *vide* Zippelius.

598.—Goetz, J. The spread of the wild rabbit (*Oryct. cuniculus* L.) in North-Eastern Poland. C.R. Sci. math. nat. Acad. polon. **1950** 8–10 pp. 10–11.

599.—Goldman, E. A. Biological investigations in Mexico. Smithson. Misc. Coll. **115** 1951 pp. xiii + 476, 71 pls.

600.—Goldring, W. Handbook of Paleontology for beginners and amateurs. Part I. The fossils. Handb. N.Y. St. Mus. No. 9 1950 pp. 1–594 97 figs. [Mammals pp. 285–309.]

601.—Gompper, H.-J. Über das schleimartige Sekret der Gallenblase. Z. mikr.-anat. Forsch. **57** 1951 pp. 280–303 5 figs.

Goodwin, M. B. *vide* Hauschka.

602.—Goor, H. van. Do metabolism regulating factors exist in the blood of cooled and warmed animals. Acta Physiol-Pharmarcol. Neerl. **1** 1951 pp. 525–532 2 figs. tables.

603.—Gordon, A. Water Shrew in Isle of Skye. Scot. Nat. **63** 1951 p. 199.

604.—Gordon, S. Haunts of the Atlantic Seal. Country Life **109** 1951 pp. 777–778 4 figs.

605.—Gouin, F. Chauves-Souris d'Alsace et de Lorraine. Bull. Ass. Phil. Alsace-Lorraine **9** 1 1950 pp. 17–18.

606.—Gowers, W. Some waterside reactions. Zoo Life, Lond. **6** 1951 pp. 63–65.

607.—Gowers, W. Measuring an elephant. Field, Lond. **197** p. 563 1 fig.

608.—Gowers, W. Measuring an elephant. Field, Lond. **197** 1951 p. 1001.

609.—Gowers, W. and **Scullard, H. H.** Hannibal's Elephants again. Numismatic Chron. (6) **10** 1950 pp. 271–283 2 pls.

610.—Grant, W. Control of deer damage in Germany. Quart. J. For. **45** 1951 pp. 45–47.

611.—Grasse, J. E. Beaver ecology and management in the Rockies. J. Forestry **49** 1 1951 pp. 3–6.

612.—Gray, F. V. and **Pilgrim, A. F.** Fermentation in the rumen of the sheep. II. The production and absorption of volatile fatty acids during the fermentation of wheaten hay and lucerne hay in the rumen. J. exp. Biol. **28** 1951 pp. 83–90 2 figs.

613.—Gray, F. V., **Pilgrim,** A. F. and **Weller,** R. A. Fermentation in the rumen of the sheep. I. The production of volatile fatty acids and methane during the fermentation of wheaten hay and lucerne hay *in vitro* by micro-organisms from the rumen. J. exp. Biol. **28** 1951 pp. 74–82.

614.—Green, E. L. The genetics of a difference in skeletal type between two inbred strains of mice (Balb C and C57blk). Genetics **36** 1951 pp. 391–409 3 figs. tables.

615.—Green, E. L. and **Russell,** W. L. A difference in skeletal type between reciprocal hybrids of two inbred strains of mice (C57blk & C3H). Genetics **36** 1951 pp. 641–651.

616.—Green, H. V. The Bighorn Sheep of Banff National Park. Nation. Parks Serv. Canada 1950 53 pp. 15 pls. [N.V.]

617.—Green, J. D. The comparative anatomy of the hypophysis with special reference to its blood supply and innervation. Amer. J. Anat. **88** 2 1951 pp. 225–311 10 pls. 16 figs.

618.—Green, M. C. Further morphological effects of the short ear gene in the house mouse. J. Morph. **88** 1951 pp. 1–21 9 figs.

619.—Green, S. H., **Mandl,** A. M. and **Zuckerman,** S. The proportion of ovarian follicles in different stages of development in rats and monkeys. J. Anat. Lond. **85** 1951 pp. 325–329 2 tabs.

620.—Greene, W. E. Jr. The development of the carpal bones in the bat. J. Morph. **89** 1951 pp. 409–422 10 figs.

621.—Gregory, W. K. Evolution Emerging. A survey of changing patterns from primeval life to man. 2 vols. N.Y. 1951 vol. 1 pp. 1–736, frontispiece; vol. 2, pp. 1–1012 figs.

Grenan, M. *vide* Smith.

622.—Gresson, R. A. R. The structure and formation of the mammalian spermatozoon. Cellule **54** 1951 pp, 79–102 2 figs.

623.—Griffin, D. R. At what distance can a flying bat perceive small objects ? J. Mammal. **32** 1951 pp. 487–488.

624.—Griffin, D. R. Audible and ultrasonic sounds of bats. Experientia **7** 1951 pp. 448–453 10 figs.

625.—Griffiths, O. H. Persian lions. Field, Lond. **198** 1951 p. 341.

626.—Grimm, H. Kleinwüchsigkeit und Fettsucht bei einem Orang Utan. Zool. Anz. **145** Erganzungsb. 1950 pp. 218–225 2 figs.

627.—Gromier, E. Grands fauves d'Afrique. **2** Paris 1951 pp. 178 36 figs. [N.V.]

628.—Gromier, Dr. Mammoths et hommes des cavernes. Paris 1951 pp, 152 18 figs. [N.V. Review Mammalia. Paris **15** 1951 p. 103.]

629.—[Gromov, I. M. and **Parfenova,** N. M.] [Notes on the rodent fauna of Indersk Preural and their history.] Bull. Soc. Nat. Moscow Ser. Biol. **56** (4) 1951 pp. 13–20 2 figs. [In Russian.]

Gross, R. *vide* Bolliger.

630.—Grote, H. Übersicht über die Säugetierfauna des Pamirgebiets. Zool. Gart. Lpz. **18** 1951 pp. 142–145.

631.—Grüneberg, H. The genetics of a tooth defect in the mouse. Proc. roy. Soc. **138B** 1951 pp. 437–452 2 figs.

632.—Grzimek, B. Tod durch Lungenmilben bei einem Schimpansen. Zool. Gart. Lpz. **18** 1951 p. 249.

633.—Gudmundsson, B. Nokkur oro um selveioi á Islandi fyrrum og nu. Náttúrufraedingurinn **14** 3–4 1944 pp. 149–169 4 figs.

634.—Guiguet, C. J. An account of Wolverine attacking Mountain Goat. Canad. Field Nat. **65** 1951 p. 187.

Guiguet, C. J. *vide* Carl.

635.—Guilday, J. E. Sexual dimorphism in the pelvic girdle of *Microtus pennsylvanicus*. J. Mammal. **32** 1951 pp. 216–217 1 fig.

636.—Gunderson, H. L. A study of some small mammal populations at Cedar Creek Forest, Anoka County, Minnesota. Occ. Pap. Minn. Mus. nat. Hist. No. 4 1950 pp. i–vii 1–49 20 figs.

637.—Gunter, G. Consumption of shrimp by the Bottle-nosed Dolphin. J. Mammal. **32** 1951 pp. 465–466.

638.—Gunter, R. Sensitivity of the cat's eye to infra-red radiations. Nature, Lond. **167** 1951 pp. 1062–1063.

639.—Gunter, R., **Harding,** H. G. W. and **Stiles,** W. S. Spectral reflexion factor of the cat's tapetum. Nature, Lond. **168** 1951 pp. 293–294.

640.—Guthrie, M. J., **Jeffers,** K. R. and **Smith,** E. W. Growth of follicles in the ovaries of the bat *Myotis grisescens*. J. Morph. **88** 1951 pp. 127–144 5 figs.

641.—Habermehl, K. H. Das Verhalten der Vena cava caudalis (postrenaler Abschnitt) und ihres viszeralen Zuflussgebietes bei der Katze (*Felis domesticus* L.). Anat. Anz. **98** 1951 pp. 295–308 7 figs.

642.—Habs, H. and **Heinz,** H. J. Beitrag zur Biologie freilebender Wanderratten. Z. Hyg. Zool. München **39** 3 1951 pp. 65–81 4 figs.

643.—Hacker, H. P. and **Pearson,** H. S. Description of the Long-Tailed Field Mouse, *Apodemus sylvaticus*, on South Haven Peninsula, Dorset, in 1937, with some observations on its wandering and homing powers. J. linn. Soc. (Zool.) **42** 1951 pp. 1–17 5 figs. 4 tabs.

644.—Haddow, A. J., **Dick,** G. W. A., **Lumsden,** W. H. R. and **Smithburn,** K. C. Monkeys in relation to the epidemiology of yellow fever in Uganda. Trans. R. Soc. trop. Med. Hyg. **45** 1951 pp. 189–224.

645.—Haddow, A. J. and **Ross,** R. W. A critical review of Coolidge's measurements of gorilla skulls. Proc. Zool. Soc. Lond. **121** 1951 pp. 43–54.

646.—Hafez, E. S. E. Mating behaviour in sheep. Nature, Lond. **167** 1951 pp. 777–778.

647.—Hagen, H. L. Composition of Deer milk. Calif. Fish Game **37** 1951 pp. 217–218.

648.—Haggqvist. G. Über polyploide Saugetiere. Verh. anat. Ges. Jena **48** 1951 pp. 39–42.

649.—Haggqvist, G. Induktion triploider Schweine durch Kolchizin. Verh. anat. Ges. Jena **49** 1951 pp. 62–65 2 figs.

Hahn, J. A. B. de *vide* Bierens de Haan.

650.—Haines, J. M. and **Gier,** H. T. Distribution of microtine rodents in Kansas. Trans. Kans. Acad. Sci. **54** 1951 pp. 58–63 figs. [N.V.]

651.—Hall, E. K. Intrinsic contractility in the embryonic rat heart. Anat. Rec. **111** 1951 pp. 381–399 5 figs.

652.—Hall, E. R. American Weasels. Univ. Kans. Publ. Mus. Nat. Hist. **4** 1951 pp. 1–466 41 pls. 31 figs.

653.—Hall, E. R. Mammals obtained by Dr. Curt von Wedel from the Barrier Beach of Tamaulipas, Mexico. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 33–47 1 fig.

654.—Hall, E. R. A new Pocket Gopher (genus *Thomomys*) from eastern Colorado. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 81–85.

655.—Hall, E. R. A synopsis of the North American Lagomorpha. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 119–202 68 figs.

656.—Hall, E. R. A new Pocket Gopher (genus *Thomomys*) from Wyoming and Colorado. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 219–222.

657.—Hall, E. R. A new name for the Mexican Red Bat. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 223–226.

658.—Hall, E. R. Charles Dean Bunker 1870–1948. Misc. Publ. Univ. Kans. Mus. Nat. Hist. No. 3 1951 pp. 1–11 front.

659.—Hall, E. R. and **Kelson,** K. R. Comments on the taxonomy and geographic distribution of some North American Rabbits. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 49–58.

660.—Hall, E. R. and **Kelson,** K. R. A new subspecies of *Microtus montanus* from Montana and comments on *Microtus canicaudus* Miller. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 73–79.

661.—Hall, E. R. and **Montague,** H. G. Two new Pocket Gophers from Wyoming and Colorado. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 25–32.

Hall, E. R. *vide* Bee.

Hall, E. R. *vide* Park.

Hall, O. *vide* Davis.

662.—Hamilton, A. Is the Guadalupe fur seal returning? Nat. Hist. N.Y. **60** 1951 pp. 90–94 7 figs.

663.—Hamilton, C. E. Evidences of cyclic reproductive phenomena in the rabbit. Anat. Rec. **110** 1951 pp. 557–571 8 figs.

664.—Hamilton, W. J. and **Harrison,** R. J. Placentation in Père David's deer, *Elaphurus davidianus.* Nature, Lond. **167** 1951 pp. 443–444 1 fig.

665.—Hamilton, W. J. and **Harrison,** R. J. Cyclical changes in the uterine mucosa and vagina of the goat. J. Anat. Lond. **85** 1951 pp. 316–324 2 pls.

666.—Hamilton, W. J. Jr. Warm weather foods of the Racoon in New York State. J. Mammal. **32** 1951 pp. 341–344.

667.—Hammond, J. Jr. Control by light of reproduction in ferrets and mink. Nature, Lond. **166** 1951 pp. 150–151.

668.—Hancock, J. Studies in monozygotic cattle twins. V. Uniformity trials—growth. N.Z. J. Sci. Tech. **33A** 4 1951 pp. 17–29 5 figs.

669.—Hankins, R. M. Values of some constituents of the blood of the normal cotton rat, *Sigmodon hispidus texianus.* J. exp. Zool. **118** 1951 pp. 437–442 2 tabs.

670.—Hanna, G. D. Alaska Fur Seals, *Callorhinus ursinus,* observed off San Francisco Bay, California. J. Mammal. **32** 1951 pp. 364–365.

Hansen, R. M. *vide* Behle.

671.—Hanström, B. The pituitary in some South-American and Oriental mammals. Acta Univ. lund. N.S. **46** 3 1950 pp. 1–28 13 figs.

672.—Hanstrom, B. and **Wingstrand,** K. G. Comparative anatomy and histology of the pituitary in the egg-laying mammals, the Monotremata. Acta Univ. lund. 2 **47** 2 1951 pp. 1–39 18 figs.

673.—Harada, F., **Miyagawa,** F. and **Sukegawa,** N. A survey of rats and rat-fleas in Yokohama and Kawasaki cities. Yokohama med. Bull. **2** 1 1951 pp. 23–34 tables.

674.—Harder, W. Zur Gliederung des Enddarmes der Nagetiere. Verh. anat. Ges. Jena **48** 1951 pp. 235–238 2 figs.

Harding, H. G. W. *vide* Gunter.

Hardy, G. A. *vide* Carl.

675.—Hardy, M. H. The development of pelage hairs and vibrissae from skin in tissue culture. Ann. N.Y. Acad. Sci. **53** 1951 pp. 546–561 4 pls. 4 figs.

Harkness, R. D. *vide* Abercrombie.

Härma, R. *vide* Suomalainen.

676.—Harman, P. J. and **Carpenter,** M. B. Volumetric comparisons of the basal ganglia of various primates including man. J. comp. Neurol. **93** 1951 pp. 125–137 6 figs.

677.—Harris, W. P. Jr. A substitute name for *Petaurista petaurista rufipes* Sody. J. Mammal. **32** 1951 p. 234.

678.—Harrison, D. L. The bats of the Segeberg-Gipshöhle in Schleswig-Holstein, with some notes on the characters of North West European *Myotis* (Vespertilionidae). Bonn. Zool. Beitr. **2** 1–2 1951 pp. 9–16 7 figs.

679.—Harrison, J. L. Squirrels for bird-watchers. Malayan Nature J. **5** 1951 pp. 134–154 15 figs.

680.—Harrison, J. L. A Kuàla Lumpur garden by night. Malay. Nat. J. **5** 1951 pp. 193–201 2 figs.

681.—Harrison, J. L. The domestic rats of Malaya. Med. J. Malaya **4** 2 1949 pp. 96–105 4 pls.

682.—Harrison, J. L. Reproduction in rats of the subgenus *Rattus.* Proc. zool. Soc. Lond. **121** 1951 pp. 673–694 6 figs.

683.—Harrison, J. L. and **Lim,** B.-L. Albinism in *Rattus cremoriventer* (Miller). J. Bombay nat. Hist. Soc. **49** 1951 pp. 780–782 4 figs.

684.—Harrison, J. L. and **Woodville,** H. C. Variation in Size and Weight in Five Species of House-Rats (Rodentia: Muridae), in Rangoon, Burma. Rec. Indian Mus. **47** 1950 pp. 65–71 7 tabs.

Harrison, J. L. *vide* Audy.

685.—Harrison, M. F. Relation between polyploidy and the amounts of deoxynucleic acid per nucleus in the liver and kidney of adult rats. Nature, Lond. **168** 1951 pp. 248–249.

686.—Harrison, R. G. A comparative study of the vascularization of the adrenal gland in the rabbit, rat and cat. J. Anat. Lond. **85** 1951 pp. 12–23 2 pls. 2 figs.

687.—Harrison, R. J. and **Matthews,** L. H. Sub-surface crypts in the cortex of the mammalian ovary. Proc. zool. Soc. Lond. **120** 1951 pp. 699–712 2 pls. 1 fig.

Harrison, R. J. *vide* Amoroso.

Harrison, R. J. *vide* Hamilton.

688.—Hart, D. S. Photoperiodicity in the female ferret. J. exp. Biol. **28** 1951 pp. 1–12 9 figs.

689.—Hart, J. S. Average body temperature in mice. Science **113** 1951 pp. 325–326 1 fig.

690.—Hart, J. S. Calorimetric determination of average body temperature of small mammals and its variation with environmental conditions. Canad. J. Zool. **29** 1951 pp. 224–233 2 figs. 5 tabs.

691.—Hase, A. Beobachtungen über das Gebaren fussloser Mäuse. Zool. Anz. **145** Erganzungsb. 1950 pp. 275–285 8 figs.

Hatt, P. *vide* Aubry.

692.—Hauschka, T. S., **Goodwin**, M. B. and **Brown**, E. Evidence for a sex-linked lethal in the house mouse. Genetics **36** 1951 pp. 235–253 5 figs.

693.—Hauser, W. Beobachtungen an einigen Tierformen Angolas in der Natur und nach dem Fang. 3. Klippschliefer, *Procavia capensis* Pall. Zool. Gart. Lpz. **18** 1951 pp. 208–210 2 figs.

694.—Hawbecker, A. C. Small mammal relationships in an Ephedra community. J. Mammal. **32** 1951 pp. 50–60 2 pls.

695.—Hay, O. Second bibliography and catalogue of the fossil vertebrata of North America, vol. II. Publ. Carneg. Instn **390** 1930 Mammalia pp. 360–931.

696.—Hayashi, H. On the causative agent of Tsutsugamushi disease isolated from field voles, *Apodemus speciosus speciosus*, inhabiting the foot area of Mt. Fuji in Japan. Kitasato Arch. **23** 3 1951 pp. 13–19 2 figs. tables.

697.—Hayes, K. J. and C. The intellectual development of a home-raised chimpanzee. Proc. Amer. phil. Soc. **95** 1951 pp. 105–107 3 figs.

698.—Hayes, W. J. Jr. Control of Norway rats with residual rodenticide Warfarin. Publ. Hlth. Rep., Wash. **65** 47 1950 pp. 1537–1555 1 fig. tables.

699.—Hayman, R. W. Notes on some Angolan Mammals. Publ. Cult. Comp. Diamantes Angola, Lisbon No. **11** 1951 pp. 31–36.

700.—Hayman, R. W. A new African Molossid bat. Rev. Zool. Bot. afr. **45** 1951 pp. 82–83.

Hayman, R. W. *vide* Swynnerton.

701.—Hazelwood, A. Mammalia. Naturalist, Lond. No. 836 1951 p. 20.

Healy, M. J. R. *vide* Yates.

702.—Heberer, G. Die südafrikanischen Australopithecinen und ihre phylogenetische Bedeutung. Z. Naturf. **3b** 1948 pp. 302–310 5 figs.

703.—Heck, H. The Breeding-Back of the Aurochs. Oryx **1** 1951 pp. 117–122 1 pl.

704.—Heck, L. Bericht über die Einbürgerung des Alpensteinbockes im Naturschutzgebiet Berchtesgaden. Natur u. Volk **81** 1951 pp. 295–297 2 figs.

705.—Heim de Balsac, H. Peuplement mammalien des îles atlantiques françaises: Ouessant. C.R. Acad. Sci. Paris **233** 1951 pp. 1678–1680.

706.—Heinrich, G. Die deutschen Waldmäuse. Zool. Jb. (Syst.) **80** 1951 pp. 99–122 4 figs.

Heinz, H. J. *vide* Habs.

707.—Heller, F. Neue fossile Säugetierreste aus der Umgebung von Muggendorf und Streitberg. Geol. Bl. NO-Bayern **1** 3 1951 pp. 105–107.

708.—Henke, W. Dritter Fund der Kurzohr - Erdmaus (*Pitymys subterraneus*) in Niedersachsen, im Kreis Hameln. Beitr. Naturk. Niedersachs. No. 8 1949 p. 3.

709.—Henriques, S. B. and O.B. Correcao do peso da glandula adrenal de ratos pela analise de covariancia com o peso corporal. Rev. Brasil. Biol. **11** 1951 pp. 95–99.

Henrot, H. *vide* Balazuc.

710.—[Heptner, V. G.] [Systematics and nomenclature of *Microtus oeconomus* Pall.; Mammalia, Muridae.] Bull. Soc. Nat. Moscow Biol. **56** 3 1951 pp. 15–20. [In Russian.]

711.—Heriot, J. E. and **Weston**, S. M. Some anomalous blood vessels in the rabbit. Proc. Zool. Soc. Lond. **120** 1951 pp. 737–741 5 figs.

712.—Herklots, G. A. C. The Hong Kong Countryside, Hong Kong 1951 pp. 1–184, ill. [Mammals pp. 81–94.]

Herlevi, A.-M. *vide* Suomalainen.

713.—Herold, W. Zum Fang vom Mäusen und Spitzmäusen mit Schlagfallen. Z. Hyg. Zool. München **37** 1949 pp. 65–69.

714.—Herold, W. Bemerkungen zur Waldmausfrage. Zool. Gart. Lpz. **18** 1951 pp. 234–241 1 fig. 3 tabs.

715.—Herre, W. Kritische Bemerkungen zum Gigantenproblem der Summoprimaten auf Grund vergleichender Domestikationsstudien. Anat. Anz. **98** 1951 pp. 49–65 12 figs.

716.—Herrington, L. P. The role of the piliary system in mammals and its relation to the thermal environment. Ann. N.Y. Acad. Sci. **53** 1951 pp. 600–607 2 figs. tables.

717.—Hershkovitz, P. Mammals from British Honduras, Mexico, Jamaica and Haiti. Fieldiana: Zool. **31** 1951 pp. 547–569 map.

Hescheler, K. *vide* Tschumi.

718.—Hesketh, G. E. Notes on some Denbighshire bats. Proc. Chester Soc. nat. Sci. **1950** 1951 pp. 130–137.

719.—Hesketh, G. E. Ringing bats in Derbyshire. Naturalist No. 839 1951 pp. 177–181.

720.—Heston, W. E. The "vestigial tail" mouse. J. Hered. **42** 1951 pp. 71–74 3 figs.

721.—Hewson, R. Some observations on the Orkney Vole, *Microtus o. orcadensis* (Millais). Northw. Nat. **23** 1–4 [1951] pp. 7–10 2 figs.

722.—Hibbard, C. W. *Thomomys talpoides* (Richardson) from a late Pleistocene deposit in Kansas. J. Mammal. **32** 1951 pp. 229–230.

723.—Hibbard, C. W. A new Jumping Mouse from the Upper Pliocene of Kansas. J. Mammal. **32** 1951 pp. 351–352 1 fig.

724.—Hibbard, C. W. An Antilocaprid from the Lower Pliocene of Beaver County, Oklahoma. Trans. Kans. Acad. Sci. **54** 1951 pp. 387–390 1 fig.

725.—Hibbard, C. W. A new Mastodon, *Serridentinus meadensis*, from the Middle Pliocene of Kansas. Contr. Mus. Pal. Univ. Michigan **9** 1951 pp. 217–225 4 pls.

726.—Hibbard, C. W. Vertebrate fossils from the Pleistocene Stump Arroyo member, Meade County, Kansas. Contr. Mus. Pal. Univ. Michigan **9** 1951 pp. 227–245 6 pls. 1 fig.

Hibiya, T. *vide* Nishiwaki.

727.—Higginbotham, A. C. and **Siers,** M. R. Hemoconcentration in the albino rat during acute hypothermia. Quart. J. Fla. Acad. Sci. **14** 1951 pp. 21–27 2 figs.

Higgins, G. F. *vide* Snell.

Hill, J. E. *vide* Laurie.

728.—Hill, K. J. The glands of the mucous membrane of the goat abomasum. J. Anat. Lond. **85** 1951 pp. 215–220 2 pls. 2 figs.

729.—Holl, R. T. Multiplicity of ovarian functions in the mouse. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 634–645 8 figs.

730.—Hill, W. C. O. Epigastric gland of *Tarsius*. Nature, Lond. **167** 1951 p. 994 1 fig.

731.—Hill, W. C. O. The external genitalia of the female chimpanzee; with observations on the mammary apparatus. Proc. zool. Soc. Lond. **121** 1951 pp. 133–145 5 figs.

732.—Hill, W. C. O. The rhinoglyphics of the neonatus (Père David's Deer). Proc. zool. Soc. Lond. **121** 1951 p. 343 1 pl.

733.—Hill, W. C. O. Report of the Society's Prosector for the year 1950. Proc. zool. Soc. Lond. **121** 1951 pp. 641–650.

734.—Hill, W. C. O. Note on the nomenclature of certain hominidae. Amer. J. Phys. Anthrop. **9** 1951 pp. 367–369.

735.—Hill, W. C. O. Observations on marsupials in the Royal Scottish Museum, with special reference to the foetal material. Trans. Roy. Soc. Edinburgh **62** (5) 1951 pp. 145–167 16 figs.

Hillemann, H. H. *vide* Beyerlein.

Hillemann, H. H. *vide* Van Arsdel.

736.—Hindle, E. Golden Hamster mutants. Abstr. zool. Soc. Lond. **1951** No. 1 1951 pp. 2–3.

737.—Hiraiwa, Y. K. and **Sumikawa,** S. Rapid and marked proliferation of Norway rats grown semi-wild on the small island, Tojima, Ehime Prefecture. Sci. Bull. Fac. Agric. Kyushu Univ. **13** 1–4 1951 pp. 406–414 6 figs.

738.—Hirata, M. Experimental investigation on flattened head harpoon. An attempt for restraining ricochet. Sci. Rep. Whales Res. Inst. Tokyo 6 1951 pp. 199–207 9 figs.

739.—Hock, R. J. The metabolic rates and body temperatures of bats. Biol. Bull. Wood's Hole **101** 1951 pp. 289–299 2 figs. 2 tabs.

740.—Hodge, W. H. The Pacarana. Burton, M. Story of Animal Life **2** 1949 pp. 303–304 2 figs.

741.—Hoecker S., G. Mutaciones dominantes reversivas en mosaico en la cepa pura de ratones C58 negra. Biologica, Santiago Nos. 12–13 1951 pp. 25–37 1 pl. [English summary.]

Hoerr, N. L. *vide* Peck.

742.—Hoffmeister, D. F. A taxonomic and evolutionary study of the Piñon Mouse, *Peromyscus truei*. Illinois biol. Monogr. **21** 4 1951 pp. 1–104 5 pls. 23 figs.

743.—Hoffstetter, R. La structure des incisives inférieures chez les équidés modernes. Importance dans la classification des Zébres-Couaggas. Bull. Mus. Hist. nat. Paris (2) **22** 1951 pp. 684–692.

744.—Hoffstetter, R. Sobre las investigaciones cientificas realizadas durante una mision en el Ecuador (1946–1951). Bol. inf. cient. nac. Quito **4** 1951 pp. 381–406.

745.—Hoffstetter, R. Rectification de nomenclature: *Schaubitherium* nom. nov. pour *Schaubia* Hoffst. 1949. C.R. Soc. Geol. France 13–14 1950 pp. 234–235.

746.—Holdenried, R., **Evans,** F. C. and **Longanecker,** D. S. Host-parasite-disease relationships in a mammalian community in the central coast range of California. Ecol. Monogr. **21** 1951 pp. 1–18 7 figs. tables.

747.—Hollander, W. F. and **Strong,** L. C. Pintail, a dominant mutation linked with brown in the house mouse. J. Hered. **42** 1951 pp. 179–182 2 figs.

Hollnagel-Jensen, *vide* Jacobsen.

748.—Holmdahl, D. E. and **Ingelmark,** B. E. The contact between the articular cartilage and the medullary cavities of the bones. Acta Anat. **12** 1951 pp. 341–349 1 fig. 3 tabs.

Holtermann, H. *vide* Boe.

749.—Hoogstraal, H. Philippine Zoological Expedition 1946–1947. Narrative and itinerary. Fieldiana: Zool. **33** 1951 pp. 1–86 7 pls. 7 figs.

750.—Hoogstraal, H., **Huff,** C. G. and **Lawless,** D. K. A malarial parasite of the African Elephant Shrew, *Elephantulus rufescens dundasi* Dollman. J. nat. Malaria Soc. **9** 1950 pp. 293–306.

751.—Hooijer, D. A. Two new Deer from the Pleistocene of Wanhsien, Szechwan, China. Amer. Mus. Nov. No. 1495 1951 pp. 1–18 4 figs.

752.—Hooijer, D. A. Questions relating to a new large anthropoid ape from the Mio-Pliocene of the Siwaliks. Amer. J. Phys. Anthrop. **9** 1951 pp. 79–96 1 pl.

753.—Hooijer, D. A. The geological age of Pithecanthropus, Meganthropus and Gigantopithecus. Amer. J. Phys. Anthrop. **9** 1951 pp. 265–282.

754.—Hooijer, D. A. On the supposed evidence of early man in the Middle Pleistocene of Southwest China. S.W. J. Anthropol. **7** 1951 pp. 77–81 2 pls.

755.—Hooijer, D. A. Pygmy Elephant and Giant Tortoise. Scient. Monthly N.Y. **72** 1951 pp. 1–8 3 figs.

756.—Hooijer, D. A. A femur of a (?) Chalicothere from the Pliocene of Upper Burma. J. Mammal. **32** 1951 pp. 467–468.

757.—Hooijer, D. A. and **Colbert,** E. H. A note on the Plio-Pleistocene boundary in the Siwalik series of India and in Java. Amer. J. Sci. **249** 1951 pp. 533–538.

758.—Hooijer, D. A. and **Colbert,** E. H. A Mastodont tooth from Szechwan, China. Fieldiana : Geol. **10** 1951 pp. 129–134 4 figs.

759.—Hooper, J. H. D. Horseshoe bats and their young: a unique series of photographs. Ill. Lond. News **219** 1951 pp. 808–809 8 figs.

760.—Hooper, J. H. D. Bat banding in Devonshire. Rep. Dev. Ass. Adv. Sci. **83** 1951 pp. 272–277 tables.

761.—Hooper, J. H. D. and W. M., and **Shaw,** T. R. Bat-banding in Devonshire. Nature, Lond. **167** 1951 p. 555.

762.—Hopkins, M. L. *Bison* (*Gigantobison*) *latifrons* and *Bison* (*Simobison*) *alleni* in southeastern Idaho. J. Mammal. **32** 1951 pp. 192–197 1 pl.

763.—Hornung, V. Hauskatze auf der Jagd nach Wasserratten. Zool. Gart. Lpz. **18** 1951 p. 60.

764.—Hornung, V. Zur Naturgeschichte des Igels, *Erinaceus europaeus*. Zool. Gart. Lpz. **18** 1951 p. 152.

Hoshino, O. *vide* Akiya.

765.—Hosokawa, H. On the pelvic cartilages of the *Balaenoptera* foetuses, with remarks on the specifical and sexual difference. Sci. Rep. Whales Res. Inst. Tokyo No. 5 1951 pp. 5–15 9 figs.

766.—Hosokawa, H. On the extrinsic eye muscles of the whale, with special remarks upon the innervation and function of the musculus retractor bulbi. Sci. Rep. Whales Res. Inst. Tokyo 6 1951 pp. 1–33 20 figs.

Houchin, O. B. *vide* Gatz.

767.—Hough, J. The habits and adaptation of the Oligocene Saber Tooth Carnivore, *Hoplophoneus*. Geol. Survey Prof. Paper Wash. 221-H 1950 pp. 125–137 6 pls.

768.—Housse, R. P. R. Los pumas o cuguardos. (Familia de los Felidos.) An. Acad. chil. Cienc. nat. No. 15 1950 pp. 69–88.

769.—Howard, M. M. Dried Cats. Man **51** 1951 pp. 149–151.

770.—Howard, W. E. Relation between low temperature and available food to survival of small rodents. J. Mammal. **32** 1951 pp. 300–312.

771.—Howard, W. E. and **Ingles,** L. G. Outline for an ecological life history of pocket gophers and other fossorial mammals. Ecology **32** 1951 pp. 537–544.

Howard, W. E. *vide* Dice.

772.—Howells, W. W. Origin of the human stock. Concluding remarks of the Chairman. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 79–86.

773.—Hubbs, C. L. Probable record of the Beaked Whale, *Ziphius cavirostris*, in Baja California. J. Mammal. **32** 1951 pp. 365–366.

774.—Hubbs, C. L. Eastern Pacific records and general distribution of the Pygmy Sperm Whale. J. Mammal. **32** 1951 pp. 403–410 3 pls.

775.—Hubbs, E. L. Food Habits of Feral House Cats in the Sacramento Valley. Calif. Fish Game **37** 1951 pp. 177–189 2 tabs. 3 figs.

776.—Hudson, C. A. N. Leopard or panther. Field, Lond. **198** 1951 p. 1103.

777.—Huey, L. M. The Kangaroo Rats (*Dipodomys*) of Baja California, Mexico. Trans. San Diego Soc. Nat. Hist. **11** 1951 pp. 205–256 2 figs.

Huff, C. G. *vide* Hoogstraal.

778.—Hughes, G. P. and **Reid,** D Studies on the behaviour of cattle and sheep in relation to the utilization of grass. J. agric. Res. **41** 1951 pp. 350–366.

779.—Hughes, J. H. 1080 (sodium fluoroacetate) poisoning of rats on ships. Publ. Hlth. Rep. Wash. **65** 32 1951 pp. 1021–1028 2 figs.

780.—Hughes Smith, S. R. Herds of white deer. Country Life **109** 1951 p. 266.

781.—Hume, M. and **Smith,** H. H. Monkeys and sunshine. Zoo Life, Lond. **6** 1951 pp. 3–5 1 fig.

782.—Humm, D. G., **Roeder,** M., **Watland,** D. C. and **Kline,** O. F. A special respiratory system in mammalian adrenal glands. Science **113** 1951 pp. 578–579.

783.—Hunt, T. Breeding of *Cryptotis parva* in Texas. J. Mammal. **32** 1951 pp. 115–116.

784.—Hurrell, H. G. Second report on mammals. Rep. Dev. Ass. Adv. Sci. **83** 1951 pp. 79–81.

785.—Hürzeler, J. Zur Kenntnis des Milchgebisses von *Oreopithecus*. Verh. schweiz. naturf. Ges. **131** 1951 p. 142.

786.—Hürzeler, J. Über *Anthropodus Rouvillei* de Lapouge. Verh. schweiz. naturf. Ges. **131** 1951 p. 142.

787.—Hürzeler, J. Zur Odontologie und Stammesgeschichte von *Pliopithecus*. Verh. schweiz. naturf. Ges. **131** 1951 p. 143.

788.—Illige, D. An analysis of the reproductive pattern of Whitetail Deer in south Texas. J. Mammal. **32** 1951 pp. 411–421 2 figs.

789.—Imaizumi, Y. Mammals of Narusawa-Mura district on the northern slopes of Mt. Fuji. Nat. Sci. & Mus. Tokyo **18** 1 1951 pp. 1–9 4 figs. [In Japanese.]

Ingelmark, B. E. *vide* Holmdahl.

Ingles, L. G. *vide* Howard.

790.—Inglis, C. M. Some wild cats. J. Bengal nat. Hist. Soc. **25** 1951 pp. 1–6 1 pl.

791.—Iredale, T. Again Gould. An Amazing Discovery. Aust. Zool. **11** 1951 pp. 316–317.

792.—Iredale, T. The Naturalist's Library. An Essay in Bibliography. Aust. Zool. **11** 1951 pp. 322–332 2 pls.

793.—Irving, L. A study on climatic adaptation in Arctic and Tropical mammals and birds. Bull. nat. Res. Coun. Wash. No. 122 1951 pp. 85–86.

794.—Irving, L. Climatic adaptation in Arctic and Tropic animals. Publ. Hlth. Rep. Wash. **66** 29 1951 pp. 939–941.

795.—Irving, L. Physiological adaptation to cold in Arctic and Tropic animals. Fed. Proc. **10** 1951 pp. 543–545.

Irwin, M. R. *vide* Stormont.

796.—Ishikawa, S., **Omote,** Y. and **Okuda,** H. Substances related to vitamin A in the whale liver oil. Sci. Rep. Whales Res. Inst. Tokyo No. 5 1951 pp. 53–59 6 figs.

797.—Jaccarino, S. Il lobo paraolfattorio degli ungulati. Monit. zool. ital. **59** Suppl. 1951 pp. 194–196.

798.—Jackson, W. B. Food habits of Baltimore, Maryland, cats in relation to rat populations. J. Mammal. **32** 1951 pp. 458–461.

799.—Jacobson, L. Ouvrages sur l'organe vomero-nasal, avec preface et notes par O. C. Hollnagel-Jensen et Erik Andreasen. Copenhagen (Einar Munksgaard) 1950 pp. xxxii + 175 pls.

800.—Jacquot, R. Données biométriques préliminaires sur l'antéhypophyse foetale du lapin. Arch. Anat. micr. Morph. exp. **40** 1951 pp. 282–297 14 figs.

801.—Jaeschke, L. and **Vauk,** G. Studien am Blut verschiedener Haustierarten und einigen ihrer Stammformen. Zool. Anz. **147** 1951 pp. 121–129.

802.—Jaffé, F. A. A quantitative study of the islets of Langerhans in the rabbit. Anat. Rec. **111** 1951 pp. 109–121 4 figs.

803.—Jahn, G., **Bergersen,** B. and **Paulsen,** H. B. Int. Whal. Statist. **25** 1951 pp. 1–71.

804.—Jahn, G., **Bergersen,** B. and **Paulsen,** H. B. Int. Whal. Statist. **26** 1951 pp. 1–82.

805.—Jameson, E. W. Jr. Local distribution of White-footed Mice, *Peromyscus maniculatus* and *P. boylei*, in the northern Sierra Nevada, California. J. Mammal. **32** 1951 pp. 197–203 2 figs.

806.—Jansen, J. The morphogenesis of the cetacean cerebellum. J. comp. Neurol. **93** 1951 pp. 341–400 15 figs.

807.—Jany, E. Das "Baumleben" von Ratten unter besonderer Berücksichtigung der Wanderratte (*Rattus norvegicus*). Z. hyg. Zool. **39** 4 1951 pp. 103–108.

808.—Jasper, R. L. and **Archdeacon,** J. W. Respiration of Rat Brain and Liver at Temperatures above 37° C. Physiol. Zoöl. **24** 1951 pp. 163–166 2 figs. 1 tab.

Jeffree, G. M. *vide* Murray.

809.—Jeffrey, L. M. A review of certain aspects of Cetacean physiology. Texas J. Sci. **3** 1951 pp. 542–553 4 figs.

810.—Jeffreys, M. D. W. Pygmies—human and otherwise. S. Afr. J. Sci. **47** 1951 pp. 227–233 4 figs.

811.—Jeffreys, M. D. W. Pygmyism. S. Afr. J. Sci. **47** 1951 p. 287.

812.—Jellison, W. L., **Kohls,** G. M. and **Philip,** C. B. Tularemia—Muskrats as a source of human infection in Utah. Rocky Mt. Med. J. Aug. 1951 4 pp.

813.—Jewell, H. A. and **Charipper,** H. A. The morphology of the pancreas of the golden hamster, *Cricetus auratus*, with special reference to the histology and cytology of the islets of Langerhans. Anat. Rec. **111** 1951 pp. 401–415 5 figs.

Jizba, Z. V. *vide* Tipper.

814.—Johansson, I. and **Venge,** O. Relation of the mating interval to the occurrence of superfetation in the Mink. Acta zool. Stockh. **32** 1951 pp. 255–258.

815.—Johnson, D. H. The water shrews of the Labrador Peninsula. Proc. biol. Soc. Wash. **64** 1951 pp. 109–113.

Johnson, M. *vide* Bullough.

816.—Johnson, M. L., **Cheney,** P. W. and **Scheffer,** T. H. Mammals of the Grand Coulee, Washington. Murrelet, Seattle **31** 1951 pp. 39–42.

Johnson, R. J. *vide* Everett.

817.—Jones, J. K. Jr. Another record of a Mountain Sheep (*Ovis canadensis*) from Nebraska. Nat. Hist. Misc. Chicago **91** 1951 p. 1.

818.—Jones, T. S. Bat records from the islands of Grenada and Tobago, British West Indies. J. Mammal. **32** 1951 pp. 223–224.

819.—Jonsgard, A. Studies on the Little Piked Whale or Minke Whale (*Balaenoptera acuto-rostrata* Lacépède). Report on Norwegian investigations carried out in the years 1943–1950. Norsk Hvalfangsttid **40** 1951 pp. 209–232 10 figs.

820.—Jost, A. Recherches sur les corrélations endocrines dans le développement foetal. Bull. Soc. fribourg. Sci. nat. **40** 1951 pp. 130–140 3 figs.

821.—Jost, A. Sur le contrôle hormonal de la différenciation sexuelle du lapin. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 577–607 9 figs.

822.—Jost, A. Recherches sur la différenciation sexuelle de l'embryon de lapin. IV. Organogenèse sexuelle masculine après decapitation du foetus. Arch. Anat. micr. Morph. exp. **40** 1951 pp. 247–281 18 figs.

823.—Junqueira, L. C., **Sessot,** A. and **Nahas,** L. Sur la nature des cellules secrétantes de la glande parotide. Bull. Microsc. appl. (2) **1** 1951 pp. 133–135 2 pls.

Kahler, H. *vide* Dalton.

824.—Kahmann, H. Das Zwergwiesel (*Mustela minuta*) in Bayern. Zool. Jb. (Syst.) **80** 1951 pp. 171–188 7 figs.

825.—Kahmann, H. and **Ostermann,** K. Wahrnehmen und Hervorbringen hoher Töne bei Kleinen Säugetieren. Experientia **7** 1951 pp. 268–269.

826.—Kahmann, H. and **Wachtendorf,** W. Das Vorkommen der Birkenmaus (*Sicista betulina*) im Bayrisch-Böhmischen Wald. Zool. Jb. (Syst.) **80** 1951 pp. 123–131 10 figs.

827.—Kaisila, J. Lepakoiden vaelluksista. Luonnon Tutk. **55** 1951 pp. 51–54 3 figs.

828.—Kalbhenn, H. Beobachtungen zur Frage des Wortverständnisses beim Hunde. Z. Tierpsychol. **8** 1951 pp. 144–146.

829.—Kalela, O. Einige Konsequenzen aus der regionalen Intensitätsvariation im Massenwechsel der Saugetiere und Vögel. Ann. zool. Soc. zool.-bot. Vanamo **14** No. 5 1951 pp. 1–31 3 figs.

830.—Kalela, O. Hiukan nisäkkäiden ja lintujen lyhytjaksoisesta runsaudenvaihtelusta ja sen tutkimisesta. Arch. Soc. zool.-bot. fenn. Vanamo **6** 1 1951 pp. 45–59. [English summary.]

831.—Kalin, J. Zum Problem der menschlichen Stammesgeschichte. Verh. Schweiz. naturf. Ges. **131** 1951 pp. 41–60 5 figs.

832.—Källen, B. The nuclear development in the mammalian forebrain with special regard to the subpallium. Acta Univ. lund. N.S. **46** 9 1951 pp. 1–43 32 figs.

833.—Kantner, M. Die Wirkung oral verabreichten Colchicins auf die Leber der Ratte. Anat. Anz. **98** 1951 pp. 265–272 4 figs.

834.—Karli, P. Sur la structure de la rétine du spermophile (*Citellus citellus* L.). C.R. Soc. Biol. Paris **145** 1951 pp. 1376–1378.

835.—Karpiński, J. J. Loś (*Alces alces* L.) w puszczy białowieskiej. Prot. Nat. Poland **7** 11–12 1951 pp. 40–48 3 figs.

836.—Kawamura, T. Social behaviour of the deer. Nat. Sci. & Mus. Tokyo **17** 3 1950 pp. 14–19. [English res.]

Kayser, C. *vide* Vendrely.

837.—Kazzaz, D. and **Shanklin,** W. M. Comparative anatomy of the superficial vessels of the mammalian kidney demonstrated by plastic (vinyl acetate) infections and corrosion. J. Anat. Lond. **85** 1951 pp. 163–165 1 pl. 2 tabs.

838.—Keeler, C. E. The minute structure of hair and correlation with morphology, physiology and behavior. J. Tenn. Acad. Sci. **26** 1951 pp. 105–111 1 fig.

839.—Kelson, K. R. Fluctuations in population of small mammals in Utah. J. Mammal. **32** 1951 pp. 113–114.

840.—Kelson, K. R. Two new subspecies of *Thomomys bottae* from New Mexico and Colorado. Univ. Kans. Publ. Mus. Nat. Hist. **5** 1951 pp. 59–71 1 fig.

841.—Kelson, K. R. Speciation in rodents of the Colorado river drainage of eastern Utah. Univ. Utah Biol. Ser. **11** 3 1951 pp. 1–125 9 maps.

842.—Kelson, K. R. A new pocket gopher from southeastern Utah. Proc. biol. Soc. Wash. **62** 1949 pp. 143–146.

Kelson, K. R. *vide* Hall.

843.—Kempe, J. E. The Malayan Sambar. Field, Lond. **197** 1951 pp. 201–202 4 figs.

844.—Kemper, H. Uber die Fusspuren von Ratten und Mäusen. Z. Hyg. Zool. München **38** 8 1950 pp. 225–245 15 figs.

845.—Kent, G. C. Jr. and **Chapman,** K. E. Survival of adrenalectomized male Hamsters. Proc. La. Acad. Sci. **14** 1951 pp. 54–56.

846.—Kerr, J. G. A Naturalist in the Gran Chaco. Cambridge 1950 pp. 1–235 24 pls. map.

847.—Keynes, Q. Africa's uncaged elephants. Nat. geogr. Mag. **99** 1951 pp. 371–382 15 figs.

848.—Khajuria, H. An abnormal specimen of *Mus platythrix grahami* Ryley (Rodentia: Muridae) from Khandala, Bombay Province. J. Bombay nat. Hist. Soc. **49** 1951 pp. 779–780 1 fig.

849.—Khajuria, H. Abnormal behaviour of a male Rhesus monkey (*Macaca mulatta mulatta* Zimmermann). J. Bombay nat. Hist. Soc. **50** 1951 p. 389.

Kikoine, J. *vide* Arambourg.

850.—Kile, J. C. Jr. An improved method for the artificial insemination of mice. Anat. Rec. **109** 1951 pp. 109–117.

851.—Kilham, L. Mother and young of *Sorex cinereus fontenalis* in captivity. J. Mammal. **32** 1951 p. 115.

852.—King, A. W. Genetics of mink: a handbook for the student and rancher. Duluth. Minn. 1951 pp. 1–182 7 pls. 4 figs. [N.V.]

King, F. L. *vide* Castle.

853.—King, J. A. The subspecific identity of the Black Hills Flying Squirrels (*Glaucomys sabrinus*). J. Mammal. **32** 1951 pp. 469–470.

King, J. E. *vide* Fraser.

King, J. W. B. *vide* Falconer.

King, T. S. *vide* Davies.

854.—Kinghorn, R. G. and **Yeager,** L. E. Plural canines in Elk. J. Mammal. **32** 1951 pp. 112–113 1 pl.

855.—Kinloch, B. G. Uganda Protectorate. Annual Report of the Game and Fisheries Department, for 1950. Entebbe 1951 pp. 110 26 pls.

856.—Kirchner, H. Riesenhirsch-Geweihe aus dem Diluvium Norddeutschlands und ihre Bedeutung für das Verständnis der Geweihgestaltung. Jb. Preuss. Geol. Land. Berl. **59A** 1939 pp. 100–131 6 figs.

857.—[Kirpitchnikov, A. A.] [On a cetacean stranded on the Red Sea shore]. Bull. Soc. Nat. Moscow Biol. **56** 2 1951 pp. 90–91 1 fig. [In Russian.]

858.—Kiss, T. Experimentell-morphologische Analyse der Nebennierenninnervation. Acta Anat. **13** 1951 pp. 81–89 2 figs.

859.—Kitching, J. W. A new species of hippopotamus from Potgietersrust. S. Afr. J. Sci. **47** 1951 pp. 209–211 1 fig.

Kivert, A. *vide* Frings.

860.—Kivy, E. The immediate and prolonged effect of single dose X-radiation on the testes and germinal epithelium of the golden hamster (*Cricetus auratus*). J. Morph. **88** 1951 pp. 573–593 18 figs. 2 graphs 3 tabs.

861.—Klaauw, C. J. van der. Size and position of the functional components of the skull. A contribution to the knowledge of the architecture of the skull, based on data in the literature. (Continuation.) Arch. neerl. Zool. **9** 1951 pp. 177–368 6 pls. 155 figs.

862.—Klatt, B. Craniologisch-physiognomische Studien an Hunden. Mitt. hamburg. zool. Mus. **50** 1950 pp. 9–129 50 figs.

863.—Klatt, B. and **Oboussier,** H. Weitere Untersuchungen zur Frage der quantitativen Verschiedenheiten gegensätzlicher Wuchsformtypen beim Hund. Zool. Anz. **146** 1951 pp. 223–240.

864.—Klaus, N. Zur funktionellen Histologie der Hirnkapillaren. Verh. anat. Ges. Jena **48** 1951 pp. 42–60 5 figs.

865.—Kleinschmidt, A. Vergleichende Untersuchungen an der Extremitatenmuskulatur des Menschen und der Anthropoiden. Verh. anat. Ges. Jena **49** 1951 pp. 153–163 3 figs.

866.—Kleinschmidt, A. Anatomische Beobachtungen an Fetthaube, Schädel, und Wirbelsäule des Gorilla "Bobby." Zool. Anz. **145** Erganzungsb. 1950 pp. 380–405 11 figs.

867.—Kleinschmidt, A. Über ein Skelet und eine Rekonstruktion des äusseren Habitus der Riesenseekuh, *Rhytina gigas* Zimmermann 1780. Zool. Anz. **146** 1951 pp. 292–314 11 figs.

868.—[Kleynenberg, S. E.] [Black Sea marine mammals.] Bull. Soc. Nat. Moscow sect. Biol. **56** 1 1951 pp. 33–39. [In Russian.]

Kline, O. F. *vide* Humm.

Kloss, G. R. *vide* Carvalho.

869.—Knight, I. M. Diseases and parasites of the Muskrat (*Ondatra zibethica*) in British Columbia. Canad. J. Zool. **29** 1951 pp. 188–214 1 pl. 12 figs. 2 tabs.

870.—Kobozieff, N. and **Pomriaskinsky-Kobozieff,** N. A. Nouvelles recherches sur les anomalies podales héreditaires chez les souris. Bull. Soc. zool. Fr. **75** 1951 pp. 253–260 2 pls. 2 tabs.

871.—Koby, F. E. Les dimensions minima et maxima des os longs d'*Ursus spelaeus*. Eclog. geol. Helvet. **43** 1951 p. 287.

872.—Koby, F.-E. Le putois d'Eversmann fossile en Suisse et en France. Verh. schweiz. naturf. Ges. **131** 1951 pp. 143–144.

873.—Koby, F.-E. Un nouveau gisement à *Ursus deningeri* von Reichenau. Verh. schweiz. naturf. Ges. **131** 1951 pp. 144–145.

874.—Koby, F. E. and **Fritz,** E. Les proportions des métacarpiens et des phalanges de la main d'*Ursus spelaeus*. Eclog. geol. Helvet. **43** 1951 pp. 288–289.

Kock, E.-de *vide* Bigalke.

875.—Koenigswald, G. H. R. von. Ein Elephant der *planifrons*-Gruppe aus dem Pliocaen West-Javas. Eclog. geol. Helvet. **43** 1951 pp. 268–274 3 figs.

876.—Koenigswald, G. H. R. von. 60 Jaar Pithecanthropus. Versl. gewone Vergad. Akad. Amst. **60** 8 1951 pp. 86–91.

Koenigswald, G. H. K. von *vide* Weidenreich.

877.—Kojima, T. On the brain of the Sperm Whale (*Physeter catodon* L.). Sci. Rep. Whales Res. Inst. Tokyo **6** 1951 pp. 49–72 3 pls. 11 figs.

878.—Komai, T. On mosaic inheritance in mammals. Amer. Nat. **85** 1951 pp. 333–334.

Konizeski, R. L. *vide* Tipper.

879.—Koopman, K. F. Fossil bats from the Bahamas. J. Mammal. **32** 1951 p. 229.

880.—Koopman, K. F. and **Williams,** E. E. Fossil Chiroptera collected by H. E. Anthony in Jamaica, 1919–1920. Amer. Mus. Nov. 1519 1951 pp. 1–29 6 figs.

Koopman, K. F. *vide* Williams.

881.—Koppers, W. Haushund und Wildhund in Zentral-Indien. Bull. Soc. fribourg. Sci. nat. **36** 1943 pp. 113–130 3 figs.

882.—Kowalski, K. *Myotis emarginatus* Geoffroy (Chiroptera, Vespertilionidae) a new bat in Polish fauna. Fragm. faun. Mus. Zool. Polon. **6** 1951 pp. 165–167.

883.—[Kraynova, L. V.] [The food of bison in the Caucasian State game-reserve.] Bull. Soc. Nat. Moscow **56** (6) 1951 pp. 3–17. [In Russian.]

884.—**Krieg,** H. Tierpsychologie Beobachtungen in Südamerika. Veröff. zool. Staatsamml. Münch. **1** 1950 pp. 63–96.

885.—**Krieg,** H. Als Zoologe in Steppen und Waldern Patagoniens. 2 Aufl. München (Bayerischer Landwirtschaftsverlag) 1951 pp. 194 41 pls. (4 col.) text illust.

886.—**Krishna Rao,** C. The morphology and development of the deer sperm. Indian vet. J. **28** 1951 pp. 183–185.

Kritzler, H. *vide* McBride.

887.—**Krogman,** W. M. Classification of fossil men. Concluding remarks by the Chairman. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 119–121.

888.—**Krölling,** O. Über die Venenversorgung der Schilddrüse bei den Raubtieren (Feliden und Ursiden). Acta Anat. **11** 1951 pp. 478–489 6 figs.

Krüger, F. *vide* Vogelberg.

889.—**Krumbiegel,** I. Giraffenmischlinge. Zool. Gart. Lpz. **18** 1951 pp. 109–114 6 figs.

890.—**Kubik,** J. Analysis of the Pulawy population of *Sorex araneus araneus* L. and *Sorex minutus minutus* L. Ann. Univ. M. Curie-Skłodowska **5C** 11 1951 pp. 335–372 3 figs. tables. [Polish with English summary.]

891.—**Kühlhorn,** F. Beobachtungen an einen gefangenen Ohrenigel (*Hemiechinus calligoni* Satunin). Zool. Anz. **147** 1951 pp. 31–37.

892.—**Kühlhorn,** F. Ein hornloser Yak. Zool. Gart. Lpz. **18** 1951 p. 150 1 fig.

Kuhn, E. *vide* Tschumi.

893.—**Kühnelt,** W. Bodenbiologie, Wien 1950 pp. 1–368 3 pls. 62 figs.

894.—**Kuroda,** N. On a specimen of rare *Rattus tanezumi* obtained in Aomori Prefecture. Annot. Zool. Jap. **24** 1951 pp. 234–237 2 figs.

895.—**Kuroda,** N. and **Okada,** Y. On two new races of *Cervus nippon* from the Southern Islands of Kyushu, Japan. Annot. Zool. Jap. **24** 1950 pp. 59–64.

896.—**Kutuzov,** H. and **Sicher,** H. The filiform and the conical papillae of the tongue in the white rat. Anat. Rec. **110** 1951 pp. 275–288 6 figs.

897.—**La Baume,** W. Die Abnutzung an Zähnen von Höhlenbären und Braunbären und ihre Bedeutung für die archäologische Forschung. Zool. Anz. **145** Erganzungsb. 1950 pp. 478–489 2 figs.

898.—**LaBlanc,** R. H. Anomaly of the Cat. Proc. Iowa Acad. Sci. **57** (1951) pp. 465–466 1 fig.

899.—**Lacorre,** F. Les migrations des rennes dans la province préhistorique des Eyzies. C.R. Acad. Sci. Paris **232** 1951 pp. 1702–1704.

900.—**Laibach,** F. Fruchtbare Maultiere ? Natur u. Volk **81** 1951 pp. 1–7 6 figs.

901.—**Laibach,** F. Über die Fruchtbarkeit von Rückkreuzungen zwischen Maultier und Pferd. Natur u. Volk **81** 1951 pp. 90–93 3 figs.

Laing, W. I. *vide* Payne.

Lampkin, G. H. *vide* Anderson.

902.—**Lamprey,** R. A. The range of grey squirrels. Field, Lond. **198** 1951 p. 988.

903.—**"Lancastrian."** Why they turn white. Field, Lond. **197** 1951 p. 396.

904.—**Lance,** E. F. Harvest mice. Field, Lond. **198** 1951 p. 514.

905.—**Lancum,** F. H. Wild mammals and the land. Min. Agric. Fish Gt. Brit. and Ireland, Bull. 150 1951 pp. 60 39 photos.

906.—**Landsmeer,** J. M. F. Vessels of the rat's hypophysis. Acta anat. **12** 1951 pp. 82–109 15 figs.

907.—**Lang,** W. D. Report on Dorset natural history for 1950 (except birds and lepidoptera). Mammalia. Proc. Dorset Nat. Hist. Arch. Soc. **72** 1950 (1951) p. 129.

908.—**Latimer,** H. B. The growth of the kidneys and the bladder in the fetal dog. Anat. Rec. **109** 1951 pp. 1–12 4 figs.

909.—**Latimer,** H. B. The weight of the eyeballs in the guinea pig. Anat. Rec. **110** 1951 pp. 349–357 2 tabs.

910.—**Latimer,** H. B. Weights, percentage weights and correlations of the endocrine glands of the adult male guinea pig. Anat. Rec. **111** 1951 pp. 299–315 2 tabs.

911.—Latimer, H. B. The weights of the brain and of its parts and the weight and length of the spinal cord in the adult male guinea pig. J. comp. Neurol. **93** 1951 pp. 37–51 2 figs.

912.—Laurie, E. M. O. and **Hill,** J. E. Use of dermestid beetles for cleaning mammalian skeletons. Museums J. **51** 1951 pp. 206–207.

913.—Lavocat, R. Le parallelisme chez les Rongeurs et la classification des Porcs-epics. Mammalia, Paris **15** 1951 pp. 32–38.

Lavocat, R. *vide* Arambourg.

914.—[Lavrovski, A. A., **Mironov,** N. P. and **Rezinko,** D. S.] [Specific composition, distribution and abundance of rodents at Ergen in State forestry areas.] Zool. J. Moscow **30** 1951 pp. 35–43. [In Russian.]

Lawless, D. K. *vide* Hoogstraal.

915.—Lawrence, B. Part I. Mammals found at the Awatovi site. Part II. Post-cranial skeletal characters of Deer, Pronghorn, and Sheep-Goat with notes on *Bos* and *Bison*. Reports of the Awatovi Expedition Peabody Museum, Harvard University, Report No. 4. Pap. Peabody Mus. Amer. Archaeol. Ethnol, Harvard Univ. **35** 1951 3 pp. vi + 43 20 figs.

916.—Layne, J. N. The use of the tail by an Opossum. J. Mammal. **32** 1951 pp. 464–465.

Leakey, L. S. B. *vide* Le Gros Clark.

917.—Leavey, J. A. Swimming squirrels. Field, Lond. **197** 1951 p. 1045.

918.—Leblond, C. P. Histological structure of hair, with a brief comparison to other epidermal appendages and epidermis itself. Ann. N.Y. Acad. Sci. **53** 1951 pp. 464–475 23 figs.

Leblond, C. P. *vide* Storey.

919.—Leege, O. Zum Vorkommen des Fischotters in Ostfriesland. Beitr. Naturk. Niedersachs. No. 5 1949 pp. 3–5.

920.—Le Gros Clark, W. E. The dentition of the Australopithecinae. Man **51** 1951 p. 32.

921.—Le Gros Clark, W. E. Dr. Robert Broom, F.R.S. Nature, Lond. **167** 1951 p. 752.

922.—Le Gros Clark, W. E. and **Leakey,** L. S. B. The Miocene Hominoidea of East Africa. The Fossil Mammals of Africa No. 1. Brit. Mus. (Nat. Hist.) 1951 pp. 1–117 9 pl. 28 figs.

923.—Le Gros Clark, W. E. and **Thomas,** D. P. Associated jaws and limb bones of *Limnopithecus macinnesi*. Fossil Mammals of Africa, No. 3, Brit. Mus. (Nat. Hist.) 1951 pp. 1–27 6 pls. 8 figs.

Lemon, J. McW. *vide* Tressler.

924.—Lemonde, P. Étude histochimique des phosphatases du tissu adipeux chez le rat. Ann. ACFAS **17** 1951 pp. 95–99 4 figs.

925.—Leopold, A. S. Deer in relation to plant succession. Trans. 15th N. Amer. Wildlife Conf. 1950 pp. 571–580.

926.—Leopold, A. S., **Riney,** T., **McCain,** R. and **Tevis,** L. The Jawbone Deer Herd. Calif. Dept. Nat. Res. Div. Fish Game, Game Bull. 4 1951 pp. 139 66 figs.

927.—Leotard, G. L'horizon visuel des grands Singes. Zooleo N.S. No. 10 1951 pp. 7–15 13 figs.

928.—Leslie, P. H. and **Chitty,** D. The estimation of population parameters from data obtained by means of the capture-recapture method. I. The maximum likelihood equations for estimating the death-rate. Biometrika **38** 1951 pp. 269–292.

Leslie-Ellis, J. *vide* Gatenby.

929.—Leuchtenberger, C. and **Schrader,** F. Relationship between nuclear volumes, amount of intranuclear proteins and desoxyribosenucleic acid (DNA) in various rat cells. Biol. Bull. Wood's Hole **101** 1951 pp. 95–98 2 tabs.

930.—Leutscher, A. Badgers at home. Countryside N.S. **15** 12 1951 pp. 367–370 1 fig.

Lewis, G. T. *vide* Bevan.

931.—Li, C. T. A study of melanin in a truly monohybrid black mouse. Genetica **25** 3–6 1951 pp. 532–544.

932.—Liddell, E. G. I. and **Phillips,** C. G. Overlapping areas in the motor cortex of the baboon. J. Physiol. **112** 1951 pp. 392–399 5 figs.

933.—Liebus, A. Über zwei Bovidenreste aus dem Franzensbader Moor. Palaeont. Z. **22** 2 1941 pp. 127–132 1 text-fig.

934.—Liers, E. E. Notes on the River Otter (*Lutra canadensis*). J. Mammal. **32** 1951 pp. 1–9 3 figs.

935.—Liers, E. My friends the land otters. Nat. Hist. N.Y. **60** 1951 pp. 320–326 14 figs.

936.—Lindemann, W. Zur Psychologie des Igels. Z. Tierpsychol. **8** 1951 pp. 224–251 20 figs.

937.—Link, V. B. Plague epizootic in cottontail rabbits. Publ. Hlth. Rep. Wash. **65** 21 1951 p. 696.

938.—Lipp, W. Studien zur Herzinnervation. I. Die Innervation der Pulmonalisklappen. Acta Anat. **13** 1951 pp. 30–62 18 figs.

939.—Livingstone, D. A new record for the mastodon *Mastodon americanus* Kerr, from Nova Scotia. Proc. N.S. Inst. Sci. **22** 1951 pp. 15–16.

Lloyd, B. J. *vide* Dalton.

940.—Lloyd, J. I. When do otters breed ? Field, Lond. **197** 1951 p. 1035 3 figs.

941.—Lloyd, J. I. Secrets of an otter. Field, Lond. **198** p. 645 2 figs.

942.—Lloyd-Jones, W. T. Habits of the Mongoose. J. Bombay nat. Hist. Soc. **50** 1951 pp. 397–398.

943.—Lochte, T. Untersuchungen an Haaren eines neugeborenen Nilpferdes und eines zwergflusspferdes. Zool. Gart. Lpz. **18** 1951 pp. 119–124 3 figs.

Logan, D. M. *vide* Donald.

Long, W. M. *vide* Bronowski.

Longanecker, D. S. *vide* Holdenried.

944.—Loo, Y.-T. The mammalian endbrain. II. The strioamygdaloid complex. Contr. biol. Lab. Sci. Soc. China Zool. **16** 1 [1947] pp. 1–25 23 figs.

945.—Lorenzo, G. De. Tigri antropofaghe. R.C. Accad. Napoli (4) **18** 1951 pp. 210–218.

946.—Lüders, L. Der Sumpfotter-*Putorius lutreola* (L.) im Landschaftsgebeit "Allertal-Barnbruch." Beitr. Naturk. Niedersachs. No. 4 1948 pp. 3–4.

947.—Ludwig, W. and **Boost,** C. Über Beziehungen zwischen Elternalter Wurfgrösse und Geschlechtsverhältnis bei Hunden. Z. indukt. Abstamm. VererbLehre **83** 1951 pp. 383–391 tables.

948.—Lumsden, W. H. R. The night-resting habits of monkeys in a small area on the edge of the Semliki Forest, Uganda. A study in relation to the epidemiology of sylvan yellow fever. J. Anim. Ecol. **20** 1951 pp. 11–30 6 figs. 6 tabs.

949.—Lumsden, W. H. R. and **Buxton,** A. P. A study of the epidemiology of yellow fever in West Nile district, Uganda. Trans. R. Soc. trop. Med. Hyg. **45** 1951 pp. 53–78 5 figs. tables.

Lumsden, W. H. R. *vide* Haddow.

950.—Lund, J. Charting of whale stocks in the Antarctic 1950/51 on the basis of iodine values. Norsk. Hvalfangsttid **40** 1951 pp. 384–386.

Lund, P. W. *vide* Couto.

951.—Lundholm, B. A skull of the true quagga (*Equus quagga*) in the collection of the Transvaal Museum. S. Afr. J. Sci. **47** 1951 pp. 307–312 5 figs.

Lundholm, B. *vide* Fitzsimons.

952.—Lüttschwager, J. Studien an der Wirbelsäule von Walen. Zool. Anz. **145** Erganzungsb. 1950 pp. 543–560 11 figs.

Lutwak-Mann, C. *vide* Mann.

953.—Lyndon, E. Koalas in the Gippsland hills. Vict. Nat. **68** 1951 p. 66.

954.—Lyne, A. G. Notes on external characters of the barred bandicoot (*Perameles gunni* Gray), with special reference to the pouch young. Proc. zool. Soc. Lond. **121** 1951 pp. 587–598 3 pls. 12 figs.

955.—Lyne, A. G. and **McMahon,** T. S. Observations on the surface structure of the hairs of Tasmanian monotremes and marsupials. Pap. roy. Soc. Tasm. **1950** 1951 pp. 71–84 108 figs.

956.—Lyon, H. L. What habitat will the Spotted Deer choose if liberated on the island of Hawaii ? Proc. Hawaii. Acad. Sci. 26th 1951 p. 4.

957.—Lyon, M. F. Hereditary absence of otoliths in the house mouse. J. Physiol. **114** 1951 pp. 410–418 3 pls. tables.

958.—McAlpine, R. J. Alkaline glycerophosphatase in the developing endocrine pancreas of the albino rat. Anat. Rec. **109** 1951 pp. 189–215 11 figs.

959.—McBride, A. F. and **Kritzler,** H. Observations on pregnancy, parturition, and postnatal behavior in the Bottlenose Dolphin. J. Mammal. **32** 1951 pp. 251–266.

McBride, A. F. *vide* Woodcock.

McCabe, M. *vide* Dawson.

McCain, R. *vide* Leopold.

960.—McCarley, W. H. Colour mutations in a small, partially isolated population of Pocket Gophers (*Geomys breviceps*). J. Mammal. **32** 1951 pp. 338–341 1 fig.

961.—McClung, R. M. The Gray Squirrel—nature's Johnny Appleseed. Animal Kingdom **54** 1951 pp. 104–110, 127–128, 4 figs.

962.—McCown, T. D. The genus *Palaeoanthropus* and the problem of superspecific differentiation among the Hominidae. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 87–96.

963.—McCutcheon, F. H. The Mammalian breathing mechanism. J. cell. comp. Physiol. **37** 1951 pp. 447–476 9 figs. tables.

964.—Macdonald, J. R. Additions to the Whitneyan fauna of South Dakota. J. Paleont. **25** 1951 pp. 257–265 4 figs.

965.—Macdonald, J. R. A cranium of *Mammuthus* (*Archidiskodon*) cf. *imperator* from northeastern South Dakota. J. Mammal. **32** 1951 pp. 466–467.

966.—McGillivray, W. A. The conversion of carotene to vitamin A in sheep and cattle. Aust. J. Sci. Res. **4B** 1951 pp. 370–376 2 figs.

967.—MacInnes, D. G. Miocene Anthracotheriidae from East Africa. Fossil Mammals of Africa, No. 4, Brit. Mus. (Nat. Hist.) 1951 pp. 1–24 4 pls. 2 figs.

968.—MacInnes, I. G. Australian Fisheries. A handbook prepared for the second meeting of the Indo-Pacific Council, Sydney, April, 1950. Sydney (Halstead Press) [1951] pp. 103 6 pls. 1 map 6 figs.

McIntyre, A. K. *vide* Eccles.

969.—Macintyre, D. Why they turn white. Field, Lond. **197** 1951 p. 517 1 fig.

970.—Macintyre, D. Melanism and altitude. Field, Lond. **197** 1951 p. 757.

971.—Macintyre, D. Mountain hare populations. Field, Lond. **198** 1951 p. 186 2 figs.

972.—Macintyre, D. When do otters breed ? Field, Lond. **198** 1951 p. 189.

973.—Mackenzie, P. Z. The Buffalo menace in Africa. Country Life **110** 1951 p. 2103 1 fig.

974.—McKeown, K. C. Note on the food of a Bandicoot. Proc. R. Zool. Soc. N.S.W. 1949–50 1951 pp. 42–43.

975.—Mackintosh, N. A. Observations on whales from ships. Nat. Inst. Oceanog. Oct. 1951 pp. 1–10.

976.—Mackrell, G. Measuring elephants. Field, Lond. **198** 1951 p. 652.

977.—Maclaren, N. P. Hind's misfortune. Field, Lond. **197** 1951 p. 133 1 fig.

978.—Maclatchy, A. R. Observations ecologiques et ethologiques sur les antilopes et le chevrotain du Gabon. Mammalia, Paris **15** 1951 pp. 1–10.

979.—McLaughlin, C. A. and **Robertson,** W. B. A new record of the rice rat, *Oryzomys palustris palustris*, from Southern Illinois. Nat. Hist. Misc. Chicago No. 80 1951 pp. 1–2.

980.—MacLulich, D. A. A new technique of animal census, with examples. J. Mammal. **32** 1951 pp. 318–328.

McMahon, T. S. *vide* Lyne.

McMeekan, C. P. *vide* Bassett.

981.—MacMillan, G. K. Shells and Mastodon. Proc. Penn. Acad. Sci. **25** 1951 pp. 139–141.

McNutt, S. H. *vide* Paredis.

982.—Maestri, O. Note biologische sui mammiferi. Miss. Biol. Sagan-Omo Roma Zool. **1** 1943 pp. 59–81 12 figs.

983.—Makino, S. Studies on murine chromosomes, VI. Morphology of the sex chromosomes in two species of *Microtus*. Annot. zool. jap. **23** 1950 pp. 63–68 1 pl.

984.—Makino, S. Studies on the murine chromosomes. V. A study of the chromosomes in *Apodemus*, especially with reference to the sex chromosomes in meiosis. J. Morph. **88** 1951 pp. 93–126 97 figs.

985.—Makino, S. and **Tateishi,** S. Notes on the chromosomes of the pangolin, *Manis pentadactyla* (Edentata). J. Fac. Sci. Hokkaido Univ. (Zool.) **10** 1951 pp. 319–323 7 figs.

986.—Malatesta, A. Considerazioni sugli Ochotonidae fossili e viventi. Boll. Serv. Geol. Ital. **71** 1951 pp. 121–146 4 pls.

987.—Mallyon, S. A. A pronounced sex difference in recombination values in the sixth chromosome of the house mouse. Nature, Lond. **168** 1951 pp. 118–119.

988.—Mandl, A. M. The phases of the oestrous cycle in the adult white rat. J. exp. Biol. **28** 4 1951 pp. 576–584 2 figs.

Mandl. A. M. *vide* Green.

989.—Mangold, R. E. Raccoon (*Procyon lotor*) mortality in southern Iowa. J. Mammal. **32** 1951 pp. 218–219.

990.—Mann, F. G. Esquema ecologico de Selva, Sabana y Cordillera en Bolivia. Publ. Inst. geogr. Univ. Chile No. 3 1951 pp. 1–236 66 pls. figs.

991.—Mann, F. G. Biologica del vampiro. Biologica, Santiago Nos. 12–13 1951 pp. 3–24 4 pls. 12 figs. [English summary.]

992.—Mann, F. G. "Aparato genital femenino de *Marmosa elegans*." Invest. zool. Chil. **1** 3 1951 pp. 11–16 8 figs.

993.—Mann, F. G. Filogenia y funcion en el esqueleto de *Marmosa elegans*. (Marsupialia didelphydae.) Invest. zool. Chil. **1** 4 1951 pp. 11–15 5 figs.

994.—Mann, T. Inositol, a major constituent of the seminal vesicle secretion of the boar. Nature, Lond. **168** 1951 pp. 1043–1044.

995.—Mann, T. and **Lutwak-Mann,** C. Secretory function of male accessory organs of reproduction. Physiol. Rev. **31** 1 1951 pp. 27–55.

996.—Manner, A. Kleine Beobachtungen an der Bisamratte, *Fiber zibethicus* L. Zool. Gart. Lpz. **18** 1951 pp. 146–148.

997.—Manville, R. H. Reports of Cougar in New York. J. Mammal. **32** 1951 p. 227.

998.—Manville, R. H. A small island community in midsummer. Ecology **32** 1951 pp. 608–617 4 figs.

999.—Maqsood, M. Observations on staining affinity and morphology of mammalian spermatozoa. Experientia **7** 1951 p. 303 3 figs.

1000.—Maqsood, M. An abnormality of mammalian spermatozoa. Experientia **7** 1951 p. 304 1 fig.

1001.—[Marcov, G.] [The Quaternary mammals in Bulgaria.] Izv. zool. Inst. Sofiya **1** 1951 pp. 99–199 50 figs. [In Bulgarian with French summary.]

1002.—[Marcov, G.] [Species of mammals new to the Bulgarian fauna. Izv. zool. Inst. Sofiya **1** 1951 pp. 344–346. [In Bulgarian with Russian and French summary.]

1003.—Marsh, A. Percentage of breeder squirrel killed during the 1949 season and its effect upon setting the 1950–51 season. J. Tenn. Acad. Sci. **26** 1951 pp. 15–21 figs.

1004.—Marshall, J. T. Jr. Vertebrate ecology of Arno Atoll, Marshall Islands. Scientific investigations in Micronesia. Atoll Res. Bull. No. 3 1951 pp. 1–38 4 pls.

1005.—Marshall, W. Eight point roe-buck. Field, Lond. **197** 1951 p. 798.

1006.—Marshall, W. H. Predation on Shrews by frogs. J. Mammal. **32** 1951 p. 219.

1007.—Marshall, W. H. Accidental death of a porcupine. J. Mammal. **32** 1951 p. 221.

Marshall, W. H. *vide* Schoonover.

1008.—Marston, H. R. Energy transactions in homeothermic animals. J. roy. Soc. N.S.W. **84** 1951 pp. 169–183 8 figs.

Martino, C. *vide* Paspaleff.

1009.—Mason, I. L. The classification of West African livestock. Commonwealth Bureau Anim. Breeding and Genetics Edinburgh, Tech. Comm. 7, 1951 pp. vii + 39 2 maps 38 figs.

1009A.—Mason, I. L. A World Dictionary of Breeds, Types and Varieties of Livestock. Tech. Comm. No. 8 Commonwealth Bureau An. Genet. Breed. Farnham Royal 1951 pp. 1–272.

1010.—Mason, M. Killer Whale in the Solent. Field, Lond. **197** 1951 p. 1000.

1011.—Massart, C. Sullo sviluppo e probabile funzione della borsa faringea nei rinolofidi (*Rhinolophus ferrum equinum*). Monit. zool. ital. **59** Suppl. 1951 pp. 236–240.

1012.—Massler, M. and **Schour,** I. The growth pattern of the cranial vault in the albino rat as measured by vital staining with alizarine red " S." Anat. Rec. **110** 1951 pp. 83–101 4 figs.

1013.—Matthews, L. H. A large Scottish Fox. Proc. Zool. Soc. Lond. **120** 1951 pp. 679–681.

Matthews, L. H. *vide* Amoroso.

Matthews, L. H. *vide* Harrison.

1014.—Matthey, R. The chromosomes of the vertebrates. Adv. Genet. N.Y. **4** 1951 pp. 159–180.

1015.—Matthey, R. La formule chromosomique de *Microtus orcadensis* Millais. Remarques methodologiques et discussion critique. Rev. suisse Zool. **58** 1951 pp. 201–213 5 figs.

1016.—Matthey, R. Chromosomes de Muridae. Experientia **7** 1951 pp. 340–341.

1017.—Mawson, C. A. and **Fischer,** M. I. Zinc content of the genital organs of the rat. Nature, Lond. **167** 1951 p. 859.

1018.—Maxia, C. Di alcuni molari di *Elephas antiquus* dei dintorni di Roma. Boll. Serv. Geol. Ital. **72** 2 1951 pp. 33–60 2 pls. 1 fig.

1019.—Maxia, C. Sopra una zanna di " *Elephas antiquus* " rinvenuto presso Morlupo (a nord di Roma). Boll. Serv. Geol. Ital. **73** 1 1951 pp. 59–62.

1020.—May, R. M. Aspects et possibilités de la greffe bréphoplastique. Bull. Soc. zool. Fr. **76** 1951 pp. 212–230.

1021.—Mayr, E. Taxonomic categories in fossil hominids. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 109–118.

Medawar, P. B. *vide* Anderson.

Medawar, P. B. *vide* Billingham.

1022.—Mehlhardt, D. Die Gefangenschaftshaltung des Dachses, *Meles meles* (L.). Zool. Gart. Lpz. **18** 1951 pp. 211–217 3 figs.

1023.—Mendez, J. L. Contribucion al conocimiento de la Region de Baruta-El Hatillo: Mamiferos. Mem. Soc. Cienc. Nat. La Salle, Venezuela **11** 1951 pp. 203–236 2 pls. 7 figs.

1024.—Menzies, J. I. Man and the zebra. Oryx **1** 1951 pp. 127–133 figs.

1025.—Mertens, R. Hvalir í sjóbúri-Náttúrufraedingurinn **21** 3 1951 pp. 113–120 4 figs.

1026.—[Merttz, P. A.] [Cervidae of the Voronezh game reserve and adjacent forests.] Bull. Soc. Nat. Moscow **56** (5) 1951 pp. 31–44 6 figs. [In Russian.]

1027.—Meyer, Fr. Über den Blutstatus normaler Kaninchen. Zool. Anz. **145** Erganzungsb. 1950 pp. 572–587.

Meyer, R. K. *vide* Beer.

Meyers, C. E. *vide* Bueker.

1028.—Middleton, A. The Indian Wild Dog. J. Bombay nat. Hist. Soc. **50** 1951 pp. 162–163.

1029.—Mikulicz-Radecki, M. v. Vergleichende Musterstudien an Wildleporiden und Hauskaninchen. Zool. Anz. **145** Erganzungsb. 1950 pp. 588–601 9 figs.

Milan, J. *vide* Beckers.

1030.—Milbank, F. The range of grey squirrels. Field, Lond. **198** 1951 p. 988.

1031.—Milton, C. and **Axebrod,** J. M. Calculi and other stones found in mammals. J. Mammal. **32** 1951 pp. 139–154 3 pls.

1032.—Minoprio, J. L. Fenomenos de similitad existentes entre *Tolypeutes matacos* Desm. y *Chlamyphorus truncatus* Harlan. An. Soc. cient. argent. **151** 1951 pp. 43–48 6 figs.

1033.—Minoprio, J. L. Nota previa sobre los pisos de la formacion del divisadero largo (Mendoza). An. Soc. cient. argent. **152** 1951 pp. 63–67 2 figs.

Mironov, N. P. *vide* Lavrovski.

1034.—Mitchell, F. B. When do Otters breed. Field, Lond. **198** 1951 p. 189.

Miyagawa, F. *vide* Harada.

1035.—Mizue, K. Grey Whales in the east sea area of Korea. Sci. Rep. Whales Res. Inst. Tokyo No. 5 1951 pp. 71–79 7 figs.

1036.—Mizue, K. Food of Whales (In the adjacent waters of Japan). Sci. Rep. Whales Res. Inst. Tokyo No. 5 1951 pp. 81–90 16 tabs.

1037.—Mizue, K. and **Murata,** T. Biological investigation on the whales caught by the Japanese Antarctic whaling fleets, season 1949–50. Sci. Rep. Whales Res. Inst. Tokyo No. 6 1951 pp. 73–131 54 figs.

1038.—Möbes, W. K. G. Bibliographie des Kaninchens nebst Anhang. I. Das Frettchen. II. Das Meerschweinchen. Halle (Akademischer Verlag Halle) 1946 pp. xvi + 318.

1039.—Moghe, M. A. Development and placentation of the Indian fruit bat, *Pteropus giganteus giganteus* (Brünnich). Proc. zool. Soc. Lond. **121** 1951 pp. 703–721 5 pls. 5 figs.

1040.—Mohiuddin, A. The postnatal development of the inferior dental nerve of the cat. J. Anat. Lond. **85** 1951 pp. 24–35 1 pl. 2 figs.

1041.—Mohr, E. Lebensdauer einiger Tiere in Zoologischen Gärten. Zool. Gart. Lpz. **18** 1951 p. 60.

1042.—Mohr, E. Bei der Renmarkning in Härjedalen. Zool. Gart. Lpz. **18** 1951 pp. 196–202 10 figs.

1043.—Mohr, E. Zur Kenntnis der Bandrobbe "*Histriophoca*" fasciata (Zimmermann 1783). Zool. Anz. **147** 1951 pp. 187–194 8 figs.

1044.—Mohr, E. L'élevage du Bison d'Europe au cours des dernières années. Mammalia, Paris **15** 1951 pp. 138–142 1 pl.

1045.—Mohr, E. Die Stimme der Robben in den europäischen Gewässern. Schrift. Naturwiss. Ver. Schleswig-Holstein **35** Karl-Gripp Festschr. 1951 pp. 29–33.

1046.—Mohr, E. Die Birkenmaus. Die Heimat, Schleswig-Holstein **58** 5 & 6 1951 pp. ?

1047.—Möhres, F. P. Über Haltung und Pflege von Fledermäusen. Zool. Gart. Lpz. **18** 1951 pp. 217–227 5 figs.

1048.—Monard, A. Note sur la faune de la Guinée Portugaise. Trab. 2a. Conf. int. Afr. occid. Bissau 1947 **3** 2 1951 pp. 93–97.

1049.—Monard, A. Résultats de la Mission Zoologique Suisse au Cameroun. Introduction pp. 9–12. Mammifères pp. 13–57. Mém. Inst. Franc. d'Afr. Noire (Centre du Cameroun), Sci. Nat. Ser. 1 1951.

Montague, H. G. *vide* Hall.

1050.—Moog, F. The functional differentiation of the small intestine. II. The differentiation of alkaline phosphomonoesterase in the duodenum of the mouse. J. exp. Zool. **118** 1951 pp. 187–207 14 figs. 2 tabs.

1051.—Moore, A. W. and **Reid,** E. H. The Dalles Pocket Gopher and its influence on forage production of Oregon mountain meadows. U.S. Dept. Agric. Washington, Circular 884, 1951 pp. 1–36 15 figs.

1052.—Moore, C. R. Studies on sex hormones and sexual differentiation in mammals. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 484–498 10 figs.

1053.—Moore, J. C. The status of the Manatee in the Everglades National Park, with notes on its natural history. J. Mammal. **32** 1951 pp. 22–36.

1054.—Moore, J. C. Additional incident of Crow attack on Rabbit. J. Mammal. **32** 1951 p. 223.

1055.—Moore, J. C. The range of the Florida manatee. Quart. J. Fla. Acad. Sci. **14** 1 1951 pp. 1–19 1 fig.

1056.—Moore, M. S. Melanism in African fauna. Field, Lond. **197** 1951 p. 921.

1057.—Moran, P. A. P. A mathematical theory of animal trapping. Biometrika **38** 1951 pp. 307–311.

1058.—Morel, P. Les cartilages larynges du Blaireau. Mammalia, Paris **15** 1951 pp. 47–49 2 figs.

1059.—Moretti, A. Resti di " Elephas meridionalis " nesti nelle ligniti di Pietrafitta (Bacino Tiberino). Boll. Serv. Geol. Ital. **71** 1951 pp. 51–57 2 figs.

Morgan, B. B. *vide* Paredis.

1060.—Morris, R. C. Protecting food crops from wild animals. J. Bombay nat. Hist. Soc. **49** 1951 p. 783.

1061.—Morris, R. C. An extraordinary find in a panther's stomach. J. Bombay nat. Hist. Soc. **50** 1951 pp. 390–391.

Morris, W. A. *vide* Cameron.

1062.—Morrison-Scott, T. C. S. Exhibition of photograph of skin of Arabian Cheetah. Abstr. Zool. Soc. Lond. **1951** No. 1 1951 p. 2.

1063.—Morrison-Scott, T. C. S. Specimens of Père David's Deer in the British Museum. Proc. Zool. Soc. Lond. **121** 1951 pp. 325–326.

1064.—Morrison-Scott, T. C. S. The technical names of the Fallow Deer and the Virginia Deer. J. Mammal. **32** 1951 pp. 125–126.

Morrison-Scott, T. C. S. *vide* Ellerman.

1065.—Moses, S. T. Whales in Baroda (*Orca* stranded at Aramda in 1943 and *Balaena* at Gajana in 1944). Bull. Dep. Fish. Baroda **10** 1947 pp. 1–5.

1066.—Mottl, M. Canidenreste von Jagsthausen und von Karlstadt. Paläont. Z. **22** 1941 pp. 310–321 4 figs.

Moussa, T. A. *vide* Gatenby.

1067.—Mukherjee, D. P. and others. The gelatinous mass in rabbit semen. Nature, Lond. **168** 1951 pp. 422–423.

1068.—Müller, H. Zur Biologie von Hermelin (*Mustela erminea* L.) und Mauswiesel (*Mustela nivalis* L.). Rev. suisse Zool. **58** 1951 pp. 421–427 3 figs.

1069.—Mulligan, R. M. and **Francis,** K. C. Weights of thyroid and parathyroid glands of normal male dogs. Anat. Rec. **110** 1951 pp. 139–143 3 figs.

1070.—Munro Fox, H. Zoogeography of land mammals. Zoo Life, Lond. **6** 1951 pp. 35–39 4 figs.

1071.—Murata, T. Histological studies on the respiratory portions of the lungs of Cetacea. Sci. Rep. Whales Res. Inst. Tokyo No. 6 1951 pp. 35–47 12 figs.

Murata, T. *vide* Mizue.

1072.—Murie, A. Coyote food habits on a southwestern cattle range. J. Mammal. **32** 1951 pp. 291–295.

1073.—Murie, O. J. Planning for Alaska's big game. Bull. nat. Res. Counc., Wash. No. 122 1951 pp. 104–105.

1074.—Murie, O. J. The Elk of North America. Wildlife Man. Inst. Washington 1951 pp. 376 27 pls. 32 figs.

1075.—Murray, D. S. and **Jeffree,** G. M. The anatomy of man and other animals or brothers under the skin. London (Watts & Co.) 1951 x + 158 pp. frontis. col. 19 pls. (3 col.) 34 figs.

1076.—Musgrave, B. F. Weasel foraging patterns in the Robinson Lake Area, Idaho. Murrelet **32** 1951 pp. 8–11 3 figs.

Nahas, L. *vide* Junqueira.

1077.—Nakai, T. Chemical studies on freshness of whale meat. IV. Some informations of *Achromobacter ubiquitum* isolated from whale carcass. Sci. Rep. Whales Res. Inst. Tokyo No. 6 1951 pp. 167–176.

1078.—Nakai, T. and **Ono,** H. The effects of electric shock and fatigue in post-mortem changes in muscle. Sci. Rep. Whales Res. Inst. Tokyo No. 6 1951 pp. 177–185.

1079.—Naora, N. Historical notes of mammals in Nippon. Part 6. Nat. Sci. & Mus. Tokyo **14** 6 1943 pp. 9–15 2 figs.

1080.—[Nasimovitch, A. A. and **Semenov-Tyan-Shanski,** O. I.] [Food of the brown bear and role as predator in a Lapland game reserve.] Bull. Soc. Nat. Moscow Ser. Biol **56** (4) 1951 pp. 3–12 3 figs. [In Russian.]

1081.—Nasr, H. Amylolytic activity in the rumen of the sheep. J. agric. Sci. **40** 3 1951 pp. 308–310.

1082.—Nath, B. On a collection of Mammals from Chota Nagpur, Bihar. Rec. Indian Mus. **48** 1950 pp. 29–44 2 tabs. 1 map.

1083.—[**Naumov,** N. P., **Dukelskaya,** I. M. and **Dombrovski,** V. V.] [New methods in campaign against field mice.] Zool. J. Moscow **30** 1951 pp. 466–476 2 figs. [In Russian.]

1084.—**Neal,** E. G. The sign of a badger. Field, Lond. **198** 1951 p. 150.

1085.—**Needham,** F. M. Tiger eating carrion. J. Bombay nat. Hist. Soc. **50** 1951 pp. 389–390.

1086.—**Neff,** E. D. Can we save the Gray Wolf ? Nat. Hist. N.Y. **60** 1951 pp. 393–396, 432 4 figs.

Negre, J. *vide* Balazuc.

1087.—**Negus,** N. C. The bushy-tailed Pack Rat. Audubon Mag. N.Y. **53** 1951 pp. 38–44 7 figs.

1088.—**Nicholls,** F. Wild Elephant seeks assistance. J. Bombay nat. Hist. Soc. **50** 1951 pp. 396–397.

1089.—**Niethammer,** G. and **Bohmann,** L. Bemerkungen zu einigen Saugetieren Bulgariens. Zool. Anz. **145** Erganzungsb. 1950 pp. 655–671 2 figs.

1090.—[**Nikitin,** V. N.] [Atlas of blood cells of agricultural and laboratory animals]. Moscow 1949. [N.V. in Russian.]

1091.—**Niort,** P. L. À propos d'un topotype de *Sorex tetragonurus* Hermann. Bull. Ass. Phil. Alsace-Lorraine **9** 1 1950 pp. 29–30.

1092.—**Nishiwaki,** M. On the periodic mark on the baleen plates as the sign of annual growth. Sci. Rep. Whales Res. Inst. Tokyo No. 6 1951 pp. 133–152 5 figs.

1093.—**Nishiwaki,** M. and **Hibiya,** T. On the sexual maturity of the Sperm Whale (*Physeter catodon*) found in the adjacent waters of Japan. (I). Sci. Rep. Whales Res. Inst. Tokyo No. 6 1951 pp. 153–165 2 pls. 7 figs.

1094.—**Nishiwaki,** M. and **Ohe,** T. Biological investigation on Blue Whales (*Balaenoptera musculus*) and Fin Whales (*Balaenoptera physalus*) caught by the Japanese antarctic whaling fleets. Sci. Rep. Whales Res. Inst. Tokyo No. 5 1951 pp. 91–167 figs.

1095.—**Nissen,** H. W. The psychology of apes. Burton, M. Story of Animal Life **2** 1949 pp. 355–366 19 figs.

1096.—**Nitkin,** N. Animals limited. Frontiers **16** 1951 pp. 46–50 5 figs.

1097.—**Noback,** C. R. Morphology and phylogeny of hair. Ann. N.Y. Acad. Sci. **53** 1951 pp. 476–492 24 figs.

1098.—**Noback,** C. R. and **Paff,** G. H. Localization of acid phosphatase in fibroblasts. Anat. Rec. **109** 1951 pp. 71–79 5 figs.

1099.—**Nobis,** G. Studien an frühgeschichtlichen Hunden. Zool. Anz. **145** Erganzungsb. 1950 pp. 672–696 6 figs.

1100.—**Norris,** C. E. Wild Life and its Preservation in Ceylon. Oryx **1** 1951 pp. 123–127.

1101.—**Norris-Elye,** L. T. S. Behavior of a newly-born Silver-haired Bat. J. Mammal. **32** 1951 pp. 221–222.

1102.—**Norris-Elye,** L. T. S. The Black Bear as a predator of man. J. Mammal. **32** 1951 pp. 222–223.

1103.—**Norris-Elye,** L. T. S. Why they turn white. Field, Lond. **198** 1951 p. 850.

1104.—**Norris-Elye,** L. T. S. The Bay Lynx in Manitoba. Canad. Field-Nat. **65** 1951 p. 119.

1105.—**Norris-Elye,** L. T. S. The cougar in Manitoba. Canad. Field-Nat. **65** 1951 p. 119.

1106.—**Nouvel,** J. Note sur la reproduction du Cerf d'Eld (*Rucervus eldi* Guthrie) au Parc Zoologique du Bois de Vincennes. Bull. Mus. Hist. nat. Paris (2) **22** 1951 pp. 682–683.

Nouvel, J. *vide* Urbain.

1107.—**Oakley,** K. A definition of man. Science News No. 20 1951 pp. 69–81 3 pls.

1108.—**Oboussier,** H. Pluripotenzerscheinungen in der Region der Rachendachhypophyse. Roux Arch. Entw. Mech. Organ. **144** 1951 pp. 618–625 4 figs.

1109.—**Oboussier,** H. Eine offene Verbindung der Hypophyse mit der Rachenhöhle. Zool. Anz. **145** Erganzungsb. 1950 pp. 697–702 3 figs.

1110.—**Oboussier,** H. Kretinismus bei Silberfüchsen ? Zool. Anz. **146** 1951 pp. 1–20 9 figs.

1111.—Odor, D. L. and **Blandau,** R. J. Observations on the formation of the second polar body in the rat ovum. Anat. Rec. **110** 1951 pp. 329–347 16 figs.

1112.—[Ognev, S. I.] [Erinaceidae of the Far East.] Bull. Soc. Nat. Moscow sect. Biol. **56** 1 1951 pp. 8–14 10 figs. [In Russian.]

1113.—Ohe, T. Iconography on the abdominal cavity and viscera of the Balaenoptera with special remarks upon the peritoneal coverings. Sci. Rep. Whales Res. Inst. Tokyo No. 5 1951 pp. 17–39 20 figs.

Ohe, T. *vide* Nishiwaki.

Okada, Y. *vide* Kuroda.

Okuda, H. *vide* Ishikawa.

1114.—Oloff, H. Zur Biologie und Ökologie des Wildschweines. Beitr. Tierk. Tierz. **2** 1951 pp. 1–95 10 figs.

1115.—Oloufa, M. Effects of thyroid gland and environmental temperature on fertilitv of male rabbits. Proc. Egypt. Acad. Sci. **6** 1951 pp. 30–36.

Oloufa, M. M. *vide* Badreldin.

1116.—Olrog, C. C. Notas sobre mamiferos y aves del archipielago de cabo de Hornos. Acta zool. lilloana **9** 1950 pp. 505–532 1 map.

1117.–[Olsufiev, N. and **Dunayeva,** T.] [Sensitivity to tularemia of *Mustela nivalis, Putorius putorius* and *Vulpes vulpes* and its possible epidemiological importance.] Zool. J. Moscow **30** 1951 pp. 78–83. [In Russian.]

Omote, Y. *vide* Ishikawa.

1118.—Orr, R. T. Cetacean records from the Pacific coast of North America. Wasmann J. Biol. **9** 1951 pp. 147–148.

1119.—Orr-Ewing, A. L. Life history of the deer mouse. For. Chron. **26** 1950 pp. 115–126 7 figs.

1120.—Osten, E. von der. *Megatherium venezuelensis* n. sp. un nuevo megaterio procedente del Estado Lara. Bol. Geol. Caracas **1** 1951 pp. 229–234 1 pl.

Ostermann, K. *vide* Kahmann.

1121.—Otero, A. R. Cernicalos vs. murcielagos. Bol. Hist. nat. Soc. Habana **2** 1951 pp. 123–124.

Owen, R. D. *vide* Stormont.

1122.—Owers, N. Studies on the cytochemistry of the placenta. Part I.—The occurrence and distribution of glycogen and iron in the embryonic stages of an insectivore, *Crocidura caerula* (Anderson). Proc. nat. Inst. Sci. India **17** 1951 pp. 499–511 1 pl. 1 fig.

1123.—Ozansoy, F. [Preliminary report on a Pontian mammalian fauna.] Bull. Geol. Soc. Turkey **3** 1 1951 pp. 147–152 figs. [N.V.]

Paff, G. H. *vide* Noback.

1124.—Page, F. J. T. The problem of ergot. Country Life **109** 1951 p. 408.

1125.—Page, F. J. T. The distribution of roe deer. Country Life **109** 1951 p. 869.

1126.—Paix, H. Note sur une anomalie dentaire chez un gorille. Bull. Inst. centraf. **1** 1 1945 pp. 109–110 figs.

1127.—Palmer, R. A new British mammal. Countryside N.S. **16** 1 1951 pp. 7–9 1 fig.

1128.—Palmer, R. S. The Whitetail Deer of Tomhegan Camps, Maine, with added notes on fecundity. J. Mammal. **32** 1951 pp. 267–280 1 pl.

1129.—Pape, V. A remarkable stag's head. Country Life **110** 1951 p. 825.

1130.—Paredis, F., **Morgan,** B. B. and **McNutt,** S. H. A cytological study of the anterior lobe of the pituitary in relation to the estrous cycle in virgin heifers. Trans. Wis. Acad. Sci. Arts Lett. **40** 1951 pp. 59–66.

Parfenova, N. M. *vide* Gromov.

1131.—Park, H. and **Hall,** E. R. The gross anatomy of the tongues and stomachs of eight New World bats. Trans. Kans. Acad. Sci. **54** 1951 pp. 64–72 34 figs.

1132.—Parker, R. R. and others. Contamination of natural waters and mud with *Pasteurella tularensis* and tularemia in beavers and muskrats in the northwestern United States. Nat. Inst. Hlth. Bull. No. 193 1951 pp. iv + 61 4 figs.

1133.—Parkman, C. H. Long-snouted Dolphin taken at Westport, Washington. Murrelet, Seattle **31** 1951 p. 47.

1134.—Parnell, J. P. Hair pattern and distribution in mammals. Ann. N.Y. Acad. Sci. **53** 1951 pp. 493–497.

1135.—Pasa, A. I depositi quaternari del Ponte di Veja. Parte II. La fauna. Mem. Mus. Stor. nat. Verona **2** [1951] pp. 279–308 1 fig. 2 maps.

1136.—Paspateff, G., **Martino,** C. and **Péchèff,** Z. Quatre formes nouvelles de mammifères Bulgares. Ann. Univ. Sofia **46** 3 1950 pp. 231–234. [French résumé.]

Pasteels, J. *vide* Bullough.

Patt, H. M. *vide* Smith.

1137.—Patten, B. M. Embryology of the Pig, 3rd edition, Philadelphia (The Blakiston Co.) 1948 pp. xiii + 352, frontis. col. 412 figs.

1138.—Patterson, B. Early Cretaceous mammals from northern Texas. Amer. J. Sci. **249** 1951 pp. 31–46 3 figs.

Patterson, B. *vide* Washburn.

1139.—Paul, W. J. Red deer in New Zealand. Field, Lond. **197** 1951 p. 518 1 fig.

Paulsen, H. B. *vide* Jahn.

1140.—[Pavlinin, V. N. and **Shvartz,** S. S.] [Experimental ecological estimation of action of starvation on animal organisms.] Zool. J. Moscow **30** 1951 pp. 620–628. [In Russian.]

1141.—Payne, W. J. A., **Laing,** W. I., **Raivoka,** E. N. Grazing behaviour of dairy cattle in the tropics. Nature, Lond. **167** 1951 pp. 610–611.

1142.—Pearsall, W. H. Mountains and Moorlands, London, 1950. [Mammals pp. 229–243.]

1143.—Pearson, A. K. and **Enders,** R. K. Further observations on the reproduction of the Alaskan fur seal. Anat. Rec. **111** 1951 pp. 695–711 1 fig.

Pearson, H. S. *vide* Hacker.

1144.—Pearson, J. and **Bavay,** J. de. The female urogenital system of *Antechinus* (Marsupialia). Pap. roy. Soc. Tasm. **1950** 1951 pp. 137–142 2 pls.

1145.—Pearson, O. P. Additions to the fauna of Santa Cruz Island, California, with description of a new subspecies of *Reithrodontomys megalotis*. J. Mammal. **32** 1951 pp. 366–368.

1146.—Pearson, O. P. Mammals in the highlands of Southern Peru. Bull. Mus. comp. Zool. Harvard **106** 1951 pp. 115–174 8 pls.

1147.—Pease, D. C. Electron microscopy of sectioned teeth. Anat. Rec. **110** 1951 pp. 539–545 2 pls.

1148.—Pease, D. C. and **Baker,** R. F. Electron microscopy of nervous tissue. Anat. Rec. **110** 1951 pp. 505–529 5 pls.

Pecheff, Z. *vide* Paspaleff.

1149.—Peck, H. M. and **Hoerr,** N. L. The intermediary circulation in the red pulp of the mouse spleen. Anat. Rec. **109** 1951 pp. 447–477 20 figs.

1150.—Peck, H. M. and **Hoerr,** N. L. The effect of environmental temperature changes on the circulation of the mouse spleen. Anat. Rec. **109** 1951 pp. 479–493.

1151.—Peel, H. G. Wild animals and birds. For. Comm. Guide, New Forest **1951** pp. 53–61 3 figs.

1152.—Peng, O. H. A new species of Bat from Cambodge, *Glischropus rosseti* sp. nov. Beaufortia No. 8 1951 pp. 1–6 3 figs. 2 tabs.

1153.—Pengelly, W. L. Recent records of Wolverines in Idaho. J. Mammal. **32** 1951 pp. 224–225.

1154.—Pequegnat, W. E. The biota of the Santa Ana Mountains. J. Ent. Zool. **42** 3–4 1951 pp. 1–84.

Pereldik, N. S. *vide* Belaev.

1155.—Peris, E. F. Le problème de l'innervation de la cornée. Acta Anat. **13** 1951 pp. 63–80 17 figs.

1156.—Perrottet, E. and **Duckert,** R. Aspect chimique de la demineralisation de l'os. Transformation de greffes osseuses en tissu musculaire. Experientia **7** 1951 pp. 419–420.

Perry, J. *vide* Friant.

1157.—Peter, K. Die zeitliche und raümliche Verknüpfung der während der Embryogenese ablaufenden Vorgänge. Zool. Anz. **146** 1951 pp. 240–259.

Peterson, R. L. *vide* de Vos.

1158.—Petrides, G. A. The determination of sex and age ratios in the Cottontail Rabbit. Amer. Midl. Nat. **46** 1951 pp. 312–336 16 figs.

1159.—Petrides, G. A. Notes on age determination in squirrels. J. Mammal. **32** 1951 pp. 111–112 1 pl.

1160.—Petrides, G. A., **Thomas,** B. O., and **Davis,** R. B. Breeding of the Ocelot in Texas. J. Mammal. **32** 1951 p. 116.

1161.—Petter, F. Contribution à l'étude du genre *Psammomys* Cretzschmar (Rongeurs murides). Mammalia, Paris **15** 1951 pp. 39–46.

1162.—Petter, F. Notes sur quelques Rongeurs du Sahara occidental. Mammalia, Paris **15** 1951 pp. 69–72.

1163.—Petter, F. Étude d'une collection de Rongeurs du Sahara Nord-Occidental. Bull. Mus. Nat. Hist. Nat. (2) **22** 1951 pp. 483–488.

1164.—Petterson, L.-E. Några iakttagelser under en inventering av det högre djurlivet i ett område väster om Sarck. Fauna o. flora **1951** pp. 177–200 7 figs.

1165.—Petzsch, H. Über anomale Weissscheckungen bei der Hausmaus (*Mus musculus*) und beim Hamster (*Cricetus cricetus*). Mitt. Mus. Naturk. Magdeb. **2** 1949 pp. 1–8.

1166.—Petzsch, H. Über Bewegungsstereotypien bei kleinen Nagetieren in Gefangenschaft—Hamster (*Cricetus cricetus* L.) und Eichhörnchen (*Sciurus vulgaris* L.). Mitt. Mus. Naturk. Magdeb. **2** 1950 pp. 113–128.

1167.—Petzsch, H. Gedanken zum Problem des Winterschlafes, insbesondere beim Hamster (*Cricetus cricetus* L.). Zool. Anz. **145** Erganzungsb. 1950 pp. 741–748.

1168.—Petzsch, H. Vergleichende biologische Beobachtungen an gefangenen *Mesocricetus auratus* Waterhouse und *Cricetus cricetus* L. Zool. Anz. **147** 1951 pp. 237–246.

1169.—Petzsch, H. Über den wissenschaftlischen Wert von Wirbeltierbastarden aus zoologischen Gärten und Blendlinge zwischen Yak und Schottischem Hochlandrind im Dresdner zoo. Zool. Gart. Lpz. **18** 1951 pp. 183–196 14 figs.

1170.—Petzsch, H. Neue Beobachtungen an gefangenen *Mesocricetus auratus* Waterhouse hinsichtlich deren eventueller Einbürgerungsgefahr als Schadnagetier, nebst diesbezüglichen Bemerkungen über *Cricetus cricetus* L. Z. Hyg. Zool. München **39** 7 1951 pp. 199–204.

1171.—Peyer, B. In Memoriam Hans Georg Stehlin. Schweiz. Pal. Abhandl. **67** 1950 [1951] p. 1 pl.

1172.—Pfitzer, D. W. Recent collections of mammals in the Great Smoky Mountain National Park. J. Tenn. Acad. Sci. **26** 1951 p. 148.

Phillips, C. G. *vide* Liddell.

1173.—Phillips, W. W. A. Rearing a baby Ceylon Grey Flying Squirrel (*Petaurista philippensis lanka*). J. Bombay nat. Hist. Soc. **50** 1951 pp. 164–165 1 fig.

Phillipson, A. T. *vide* Duncan.

1174.—Phythian-Adams, E. G. Jungle memories. Part IX—antelope and deer. J. Bombay nat. Hist. Soc. **50** 1951 pp. 1–12 2 pls.

Picosse, M. *vide* Della Serra.

1175.—Pictet, A. and **Ferrero,** A. La descendance d'un croisement interspécifique de cobayes (*Cavia aperea* D'Az. × *Cavia cobaya* Marcg) analysée durant 25 années. Genetica **25** 1951 pp. 357–515 6 pls. 21 figs.

1176.—[Pidoplitchko, I. G.] [*Muntiacus flerovi* sp. nov. from Pliocene deposits of the southern Ukraine Republic.] C.R. Acad. Sci. URSS N.S. **81** 1951 pp. 677–679 fig. [In Russian.]

Pilgrim, A. F. *vide* Gray.

1177.—Pill, A. L. Jug Holes Cave and its bats. Naturalist, Lond. No. 836 1951 p. 7.

1178.—Pincus, C. Fertilization in mammals. Scient. Amer. **184** 3 1951 pp. 44–47 4 figs.

Pincus, C. *vide* Chang.

1179.—Pinon, R. La chauve-souris dans le folklore wallon. Rev. verviét. Hist. nat. **7** 1950 pp. 102–106 **8** 1951 pp. 14–22.

1180.—Pitman, C. R. S. High altitude leopards. Uganda J., Kampala **15** 1951 pp. 114–115.

Pitozynski, W. J. *vide* Bertalanffy.

1181.—Piveteau, J. Recherches sur l'encéphale de Lémuriens disparus. Ann. Paleont. Paris **36** 1951 pp. 87–103 6 figs.

1182.—Piveteau, J. Recherches sur l'évolution de l'encéphale chez les carnivores fossiles. Ann. Paleont. Paris **37** 1951 pp. 135–151 19 figs.

1183.—Piveteau, J. Note sur l'encéphale d'un mustélidé Oligocène. Bull. Soc. Hist. nat. Toulouse **85** 1951 pp. 263–265.

1184.—Piveteau, J. Images de mondes disparus. Un épisode de l'histoire des mammifères dans le Bassin de Paris. Nature, Paris No. 3191 1951 pp. 72–76 7 figs.

1185.—Piveteau, J. Images des mondes disparus, Paris 1951 pp. 1–157 107 figs.

1186.—Po-Chedley, D. S. A method for staining the scales of coarse hairs. J. Mammal. **32** 1951 p. 232.

1187.—Pocock, R. I. Catalogue of the genus Felis, London (British Museum, Nat. Hist.) 1951 pp. vii + 190 9 figs.

1188.—Pohl, L. Sauvera-t-on la mouflon du desert aux Etats-Unis ? Terre et la Vie **98** 1 1951 p. 47.

Pokorny, B. *vide* Bartak.

1189.—Pokorný, M. Příspěvek k paleontologii diluvia v předmosti u přerova. Cas. moravsk. Mus. **36** 1951 pp. 33–52 tables.

1190.—[Polezhayev, L. V.] [Replacement of bone damage in the skull of mice.] C.R. Acad. Sci. URSS N.S. **77** 1951 pp. 525–528. [In Russian.]

1191.—Pollack, E. M. Observations on New England Bobcats. J. Mammal. **32** 1951 pp. 356–358.

1192.—[Polyakov, N. G.] [Reflexes from the ventral aorta and their influence on blood circulation and respiration.] Adv. Mod. Biol. Moscow 1951 **31** pp. 314–316 pl. [In Russian.]

Pomriaskinsky-Kobozieff, N. A. *vide* Kobozieff.

1193.—Ponton, J. Why they turn white. Field, Lond. **197** 1951 p. 705.

Popov, A. I. *vide* Portenko.

Porcheron, P. *vide* Aubry.

1194.—[Portenko, L. A., **Tikhomirov,** B. A. and **Popov,** A. I.] [First results of disinterment of the Taymyrian mammoth, and study of the surroundings.] Zool. J. Moscow **30** 1951 pp. 3–16 6 figs. [In Russian.]

1195.—Portig, F. Bemerkungen zur Überwinterung des Hamsters (*Cricetus cricetus* L.). Zool. Anz. **145** Erganzungsb. 1950 pp. 756–760.

Portnova, N. T. *vide* Belaev.

Prakash, S. *vide* Ramakrishnan.

1196.—Prasad, M. R. N. Changes in the reproductive organs of the male palm squirrel *Funambulus palmarum palmarum* (Linn.). Half-yrly J. Mysore Univ. **11B** 1951 pp. 89–105 9 figs.

1197.—Prell, H. Der Riesenhirsch als angeblich historische Wildart. Zool. Anz. **145** Erganzungsb. 1950 pp. 778–793 5 figs.

1198.—Prell, H. Neues von Caesar's Hercynischem Einhorn. Zool. Anz. **146** 1951 pp. 330–337 4 figs.

1199.—Price, L. and **Couto,** C. de P. Vertebrados terrestres do Eoceno na bacia calcarea de Itaborai. An. Segundo Congr. Panamericano Engen. Min. Geol., Rio de Janeiro **3** 1946 [1950] pp. 149–173. [N.V.]

1200.—Pringle, J. A. The vanishing Oribi. African Wild Life **5** 1951 p. 346.

1201.—Pruitt, W. O. Jr. Mammals of the Chase S. Osborn Preserve, Sugar Island, Michigan. J. Mammal. **32** 1951 pp. 470–472.

1202.—Prychodko, W. Zur Variabilität der Rötelmaus *Clethrionomys glareolus* in Bayern. Zool. Jb. (Syst.) **80** 1951 pp. 482–506 7 figs.

1203.—Pujol, J. G. Ideas paleantropologicas de F. Weidenreich. Bol. Soc. esp. Hist. nat. Geol. **48** 2 1950 pp. 167–183 6 figs.

1204.—Quay, W. B. Observations on mammals of the Seward Peninsula, Alaska. J. Mammal. **32** 1951 pp. 88–99 3 figs.

1205.—Quick, H. F. Notes on the ecology of Weasels in Gunnison County, Colorado. J. Mammal. **32** 1951 pp. 281–290.

1206.—Quimby, D. C. The life history and ecology of the jumping mouse, *Zapus hudsonius*. Ecol. Monogr. **21** 1951 pp. 61–95 14 figs., tables.

1207.—Quiring, D. P. Functional anatomy of the Vertebrates. New York (McGraw Hill) 1950 pp. xi + 624, 257 figs.

1208.—Quiring, D. P. A comparison between *Microtus drummondi* (Aud. & Bach.) and *Microtus pennsylvanicus pennsylvanicus*. Growth **15** 1951 pp. 101–120 5 figs. tables.

1209.—Railston, W. Bats abroad in daylight. Country Life **110** 1951 p. 2036.

Raivoka, E. N. *vide* Payne.

1210.—Rakovec, I. Janishi'lev (*Felis spelaea* Goldf.) iz postojnske jame. Razpr. Slov. Akad. Zuan. Umetn. Class. IV. Hist. nat. med. **1** 1951 pp. 127–172 2 figs. [English summary.]

1211.—Rakovec, I. Onajdbah mastodonte (*Mastodon arvernensis* Croiz. et Job.) na štagerskem. Razpr. Slov. Akad. Zuan. Umetn. Class. IV. Hist. nat. med. **1** 1951 pp. 173–202 2 figs. [English summary.]

Rall, W. *vide* Brock.

1212.—Ramakrishna, P. A. Studies on reproduction in bats. I. Some aspects of reproduction in the Oriental vampires, *Lyroderma lyra lyra* Geoff. and *Megaderma spasma* (Linn.). Half-yrly J. Mysore Univ. **11B** 1951 pp. 107–118 1 pl. 1 fig.

1213.—Ramakrishnan, S. P. and **Prakash,** S. Susceptibility of the Indian garden squirrel (*Sciurus palmarum*) to *Plasmodium berghei* and its asexual periodicity. Nature, Lond. **167** 1951 p. 533.

1214.—Rand, A. L. and A. S. Mammal bones from dunes south of Lake Michigan. Amer. Midl. Nat. **46** 1951 pp. 649–659.

1215.—Rand, R. W. Seal Pups. African Wild Life, Johannesburg **5** 1951 pp. 53–56 3 figs.

1216.—Rankin, N. Antarctic Isle. Wild Life in South Georgia. London (Collins) 1951 pp. 383 frontis. 95 pls. 12 figs.

1217.—Ratcliffe, F. N. Flying fox and drifting sand, Sydney 1948 pp. i–xvi, 1–332 29 pls.

1218.—Ratcliffe, F. N. The rabbit problem: a survey of research needs and possibilities. Commonwealth Sci. Ind. Res. Org. Melbourne 1951 17 pp. [N.V. Review, Nature, London **168** 1951 pp. 932–934.

Rauch, H. *vide* Chase.

1219.—Rausch, R. Observations on a cyclic decline of lemmings (*Lemmus*) on the Arctic coast of Alaska during the Spring of 1949. Arctic **3** 1951 pp. 166–177 6 figs.

1220.—Rausch, R. and **Schiller,** E. L. Hydatid disease (*Echinococcosis*) in Alaska and the importance of rodent intermediate hosts. Science **113** 1951 pp. 57–58 1 fig.

1221.—Ray, J. L. External characters of the adult (Père David's Deer) pp. 336–337. The external characters of the neonatus, pp. 337–343 12 figs. The anatomy of the neonatus, pp. 343–364 29 figs. External characters of the foetus and foetal membranes, pp. 366–367 2 figs. Proc. zool. Soc. Lond. **121** 1951.

Raybuck, H. E. *vide* Gardner.

1222.—Raynaud, A. Recherches expérimentales sur le développement de l'appareil génital et le fonctionnement des glandes endocrines des foetus de souris et de mulot. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 518–576 14 figs.

1223.—Raynaud, A. Les glandes annexes du tractus urogenital des campagnols agrestes (*Microtus agrestis* L.). Bull. biol. **85** 1951 pp. 323–339 2 pls. 4 figs.

1224.—Raynaud, A. Spermatogénèse active, en hiver, chez les mulots (*Apodenus sylvaticus* L.) élévés dans une cage placée à l'extérieur, dans un jardin. C.R. Soc. Biol. Paris **145** 1951 pp. 1063–1069 2 figs.

1225.—Raynaud, A. Reproduction en hiver des Campagnols agrestes (*Microtus agrestis* L.) dans le département du Tarn. Bull. Soc. zool. France **76** 1951 pp. 188–200 1 pl.

1226.—**Reddy,** D. V. S. and **Subrahmanyam,** K. K. The buffalo. Need for intensive studies on the natural history, morphology and physiology of the buffalo. Indian vet. J. **27** 1950 pp. 11–22 2 pls.

1227.—**Reed,** C. A. Locomotion and appendicular anatomy in three Soricoid insectivores. Amer. Midl. Nat. **45** 1951 pp. 513–671 34 figs.

1228.—**Reed,** C. A. Pericardio-peritoneal herniae in mammals, with description of a case in the domestic rat. Anat. Rec. **110** 1951 pp. 113–119 2 figs.

1229.—**Reeder,** W. G. Breeding record of the Coati Mundi in the United States. J. Mammal. **32** 1951 pp. 362–363.

1230.—**Reeder,** W. G. and **Cowles,** R. B. Aspects of thermoregulation in bats. J. Mammal. **32** 1951 pp. 389–403 2 pls. 2 figs.

Reeder, W. G. *vide* Stager.

Reichlen, H. *vide* Friant.

Reichman, S. *vide* Sellers.

Reid, D. *vide* Hughes.

Reid, E. H. *vide* Moore.

1231.—**Reid,** J. A. Squirrels eating flowers. Malay Nat. J. **5** 1951 p. 209.

1232.—**Reinhart,** R H. A new genus of Sea Cow from the Miocene of Colombia. Bull. Dept. Geol. Sci. Univ. Calif. Publ. **28** 1951 pp. 203–214 2 figs.

1233.—**Remane,** A. Die Entstehung der Bilophodontie bei den Cercopithecidae. Anat. Anz. **98** 1951 pp. 161–165 2 figs.

1234.—**Rendahl,** H. Bemerkungen über einige Arten der Gattung der Rötelmäuse (*Cleithrionomys*). Zool. Anz. **145** Erganzungsb. 1950 pp. 813–830 7 figs.

1235.—**Rendel,** J. M., **Robertson,** A. and **Wright,** G. M. Genetic variability and artificial insemination. Nature, Lond. **167** 1951 p. 322.

1236.—**Reventlow,** A. Observations on the walrus (*Odobenus rosmarus*) in captivity. Zool. Gart. Lpz. **18** 1951 pp. 227–234 5 figs.

Rezinko, D. S. *vide* Lavrovski.

1237.—**Rice,** H. C. Jr. Jefferson's gift of fossils to the Museum of Natural History in Paris. Proc. Amer. phil. Soc. **95** 1951 pp. 597–627 15 figs.

1238.—**Richardson,** F. L. Further studies on the mammary gland development in male mice at nine weeks of age. Anat. Rec. **111** 1951 pp. 669–693 20 figs.

1239.—**Richmond,** N. D. Field methods for collecting mammal ectoparasites. J. Mammal. **32** 1951 pp. 123–125.

1240.—**Riedel,** A. La fauna olocenica della stazione preistorica di S. Briccio di Lavagno. Mem. Mus. Stor. nat. Verona **2** [1951] pp. 11–16.

1241.—**Riedel,** A. Risultati e significato degli studi di paleontologia degli animali domestici. Natura, Milano **42** 3–4 1951 pp. 101–106.

1242.—**Riney,** T. Relationships between birds and deer. Condor **53** 1951 pp. 178–185.

Riney, T. *vide* Leopold.

1243.—**Ringleben,** H. Die nordische Wühlmaus (Rattenkopf) *Microtus oeconomus* (Pallas), auf Neuwerk. Beitr. Naturk. Niedersachs. No. 4 1948 p. 4.

Rinjard, J. *vide* Urbain.

Ritenour, R. *vide* Svihla.

1244.—**Roberts,** A. The Mammals of South Africa. S. Africa 1951 pp. xlviii + 700 77 pls. (23 col.).

1245.—**Roberts,** F. W. The Quagga. Field, Lond. **198** p. 652.

Roberts, J. H. *vide* Dalquest.

Robertson, A. *vide* Rendel.

Robertson, W. B. *vide* McLaughlin.

Robinson, J. T. *vide* Broom.

1246.—**Robinson,** R. Dutch-type white-spotting in rabbits. Nature, Lond. **168** 1951 p. 300.

1247.—**Robinson,** T. J. Reproduction in the ewe. Biol. Rev. **26** 2 1951 pp. 121–157 3 figs.

1248.—**Robinson,** T. J. The control of fertility in sheep. Part I. Hormonal therapy in the induction of pregnancy in the anoestrous ewe. J. agric. Sci. **40** 1951 pp. 275–307 5 pls. 3 figs.

1249.—Roe, F. G. The North American Buffalo—a critical study of the species in its wild state. Toronto 1951 pp. 953 1 pl.

1250.—Roebuck, A. Observations on the Wood-Mouse (*Apodemus sylvaticus*). Ann. appl. Biol. **38** 1951 pp. 722–724.

Roeder, M. *vide* Humm.

1251.—Roest, A. I. Mammals of the Oregon Caves area, Josephine County. J. Mammal. **32** 1951 pp. 345–351.

1252.—Romer, A. S. *Bison crassicornis* in the late Pleistocene of New England. J. Mammal. **32** 1951 pp. 230–231.

1253.—Rosen, M. N. and others. An epizootic of foot rot in California deer. Trans. 16th N. Amer. Wildl. Conf. 1951 pp. 164–179 6 figs.

Rosenberg, H. *vide* Amoroso.

1254.—Rosevear, D. R. Nigerian Mammals, Lagos 1951 pp. 1–87 49 figs.

Ross, R. W. *vide* Haddow.

Ross, S. *vide* Smith.

1255.—Rowan, W. Canada's premier problem of animal conservation. New Biology No. 9 1951 pp. 38–57 1 fig.

1256.—Rowlands, I. W. Seminal hyaluronidase and the dilution factor. Union Internat. Sci. biol. Paris Sér. B (Colloques) No. 3 1949 pp. 12–22.

Rowlands, I. W. *vide* Amoroso.

1257.—Rudin, D. O., **Eisenman,** G. A method for dissection and electrical study *in vitro* of mammalian central nervous tissue. Science **114** 1951 pp. 300–302 3 figs.

1258.—Ruffle, The. British roe heads. Field, Lond. **197** p. 425 4 figs.

1259.—Rugh, R. The mouse thyroid and radioactive iodine. J. Morph. **89** 1951 pp. 323–365 11 figs.

1260.—Runner, M. N. Differentiation of intrinsic and maternal factors governing intrauterine survival of mammalian young. J. exp. Zool. **116** 1951 pp. 1–20 5 tabs.

1261.—Rusconi, C. Restos de megaterio hallados en Mendoza. An. Soc. Cient. argent. **150** (6) 1950 pp. 271–276 figs. [N.V.]

Russell, W. L. *vide* Green.

1262.—Rutter, R. J. Notes on the *Peromyscus* of Ontario. Canad. Field Nat. **65** 1951 pp. 80–81.

1263.—Rzasnicki, A. Zebras and quaggas. Ann. Mus. zool. polon. **14** 1951 pp. 203–252 16 pls. 4 figs.

Saban, R. *vide* Anthony.

1264.—Sailer, O. Aus der Nilpferd-Aufzucht des Dresdener Zoo. Zool. Anz. **145** Erganzungsb. 1950 pp. 835–839 3 figs.

1265.—Salmon, R. J. D. Ways of African elephants. Field, Lond. **198** 1951 p. 17 3 figs.

Salvesen, S. *vide* Boe.

1266.—Sanborn, C. C. Two new mammals from southern Peru. Fieldiana: Zoology **31** 1951 pp. 473–477 2 pls.

1267.—Sanborn, C. C. Mammals from Marcapata, Southeastern Peru. Pub. Mus. Hist. Nat. "Javier Prado" Univ. Nac. Mayor San Marcos 6 (A) 1951 pp. 1–26.

1268.—Sanborn, C. C. Colonies of Illinois bats invaded by business. Bull. Chicago nat. Hist. Mus. **22** 5 1951 pp. 4–5 1 fig.

1269.—Sandenbergh, J. A. B. The Kruger National Park. Provision of water for wild life. Oryx **1** 1951 pp. 187–189.

1270.—Sanden-Guja, W. von. Weiteres von der Birkenmaus. Z. Tierpsychol. **8** 1951 pp. 143–144 1 fig.

1271.—Sanderson, I. T. How to know the American mammals. New York 1951 pp. 164, 183 figs.

Sarajas, S. *vide* Suomalainen.

Satta, L. *vide* Semenza.

1272.—Savage, D. E. Late Cenozoic vertebrates of the San Francisco Bay region. Univ. Calif. Pub. Bull. Dept. Geol. Sci. **28** 1951 pp. 215–314 51 figs.

1273.—Savage, D. E. A Miocene Phyllostomatid bat from Colombia, South America. Univ. Calif. Publ. Bull. Dept. Geol. Sci. **28** 1951 pp. 357–366 15 figs.

1274.—Savage, D. E. Report on fossil vertebrates from the Upper Magdalena Valley, Colombia. Science **114** 1951 pp. 186–187.

Savage, D. E. *vide* Chappell.

Savage, D. E. *vide* Stirton.

1275.—Sawin, P. B. and **Crary,** D. D. Morphogenetic studies of the rabbit. X. Racial variations in the gall bladder. Anat. Rec. **110** 1951 pp. 573–590 2 figs.

1276.—Scaccini, A. Sulla sinfisi mandibolare dei mammiferi domestici. Riv. Biol. N.S. **43** 1951 pp. 457–471 2 pls.

1277.—Schantz, V. S. A substitute name for *Taxidea taxus nevadensis* Schantz. J. Mammal. **32** 1951 pp. 126–127.

1278.—Schantz, V. S. Records of the Least Weasel, *Mustela rixosa*, in South Dakota. J. Mammal. **32** 1951 pp. 225–226.

1279.—Schaub, S. *Soergelia* nov. gen., ein Caprine aus dem thüringischen Altpleistocaen. Verh. schweiz. naturf. Ges. **131** 1951 p. 141.

1281.—Schaub, S. and **Viret,** J. Restes de mammifères dans les sables à mastodontes de la Roche Lambert près de Saint-Paulien (Haute-Loire). C.R. Séances Soc. géol. Fr. Paris **2** 1951 pp. 20–22.

Schaub, S. *vide* Stehlin.

1280.—Steiner, H. Die embryonale Hand- und Fussskelettentwicklung von *Tupaia*. Verh. schweiz. naturf. Ges. **131** 1951 pp. 153–154.

1282.—Scheffer, V. B. Measurements of Sea Otters from Western Alaska. J. Mammal. **32** 1951 pp. 10–14.

1283.—Scheffer, V. B. Cryptorchid Fur Seals. Amer. Midl. Nat. **46** 1951 pp. 646–648 1 fig.

Scheffer, T. H. *vide* Johnson.

1284.—Scheidegger, S. Schussverletzungen von Elefantenzähnen. Natur u. Volk **81** 1951 pp. 259–261 2 figs.

1285.—Schein, M. W. Field test of the efficiency of the rodenticides compound W.A.R.F.42. Publ. Hlth. Rep. Wash. **65** 11 1951 pp. 368–372.

1286.—Schier, B. Wege und Formen des ältesten Pelzhandels in Europa. Arch. Pelzk. **1** 1951 pp. 1–75 2 figs. 2 charts.

1287.—Schier, B. Pelze in altertumskundlicher Sicht. Arch. Pelzk. **2** 1951 pp. 1–63 4 figs.

Schiller, E. L. *vide* Rausch.

1288.—Schilling, E. Vergleichend morphologische Betrachtungen au den Nieren von Wild- und Haustieren. (Ein Beitrag zur Phylogenie der Säugernieren). Zool. Anz. **147** 1951 pp. 1–13 9 figs.

1289.—Schleidt, W. M. Töne hoher Frequenz bei Mäusen. Experientia, Basel **7** 1951 pp. 65–66 2 figs.

1290.—Schleidt, W. M. Orientierende Versuche über die Heimkehrfähigkeit der Rötelmaus (*Evotomys glareolus ruttneri* Wettst.). Z. Tierpsychol. **8** 1951 pp. 132–137 3 figs.

1291.—Schleidt, W. M. Nest und "Zuflucht" bei Mäusen. Z. Tierpsychol. **8** 1951 pp. 137–140 1 fig.

1292.—Schmidt, F. Die Marder und ihre Zucht. Beitr. Tierk. Tierz. **4** 1951 pp. 1–59 21 figs.

1293.—Schmidt, Ph. Über den Feldhasen. Schweiz. Natursch. **15** 1949 pp. 40–44 8 figs.

1294.—Schmidt-Nielsen, K. Tissue respiration and body size. Science **114** 1951 pp. 306–307.

1295.—Schmiedt, E. Zellkerngrösse und sogenannte kompensatorische Hypertrophie der Mäuseniere. Z. mikr.-anat. Forsch. **57** 1951 pp. 249–275 5 figs. 3 tabs.

1296.—Schmitz, W. Vorkommen der Wildkatze, *Felis silvestris*, Schreb. in Niedersachsen. Beitr. Naturk. Niedersachs. No. 6 1949 pp. 3–8.

1297.—Schneider, K. M. Zur gewichtsmässigen Jugendentwicklung gefangen gehaltener Wildcaniden nebst einigen zeitlichen Bestimmungen über ihre Fortpflanzung. Zool. Anz. **145** Ergänzungsb. 1950 pp. 867–910 8 figs.

1298.—Schneider, K. M. Zur gewichtsmassigen Jugendentwicklung gefangen gehaltener Wildcaniden nebst einigen zeitlichen Bestimmungen über ihre Fortpflanzung. Verh. dtsch. zool. Ges. **1950** [1951] pp. 271–285 4 figs.

1299.—Schofield, G. The argentaffin cells of the small intestine of the guinea-pig. Acta Anat. **11** 1951 pp. 414–430 19 figs.

1300.—Schoonover, L. J. and **Marshall,** W. H. Food habits of the Raccoon (*Procyon lotor hirtus*) in north-central Minnesota. J. Mammal. **32** 1951 pp. 422–428 2 figs.

Schops, P. *vide* Dathe.

1301.—Schorger, A. W. *Zapus* with white tail-tip. J. Mammal. **32** 1951 p. 362.

1302.—Schorger, A. W. A brief history of the steel trap and its use in North America. Trans. Wis. Acad. Sci. Arts Lett. **40** 1951 pp. 171–199 8 figs.

Schour, I. *vide* Massler.

Schrader, F. *vide* Leuchtenberger.

1303.—Schreuder, A. The three species of *Trogontherium,* with a remark on *Anchitheriomys.* Arch. néerl. Zool. **8** 1951 pp. 400–433 4 pls. 5 figs.

1304.—Schroder, H. H. An animal saved from extinction. Country Life **109** 1951 pp. 259–260 2 figs.

1305.—Schuchardt, E. Der Index der Schadelbasismitte in der Phylogenese. Verh. anat. Ges. Jena **48** 1951 pp. 118–120.

1306.—Schueler, R. L. Red Fox food habits in a wilderness area. J. Mammal. **32** 1951 pp. 462–464.

Schuler, W. *vide* Benz.

1307.—Schultz, A. H. The specializations of man and his place among the catarrhine primates. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 37–53 1 ph. 7 figs.

1308.—Schulz, C. Die relative Grösse cytoarchitektonischer Einheiten im Grosshirn der weissen Ratte, weisen Maus und Zwergmaus. Zool. Jb. (Allg. Zool.) **63** 1951 pp. 64–106.

1309.—Schulz, K. H. Notes on wild-rodent plague in South Africa. J. trop. Med. Hyg. **54** 1951 pp. 249–255.

1310.—Schwartz, A. A new race of Bat (*Nycticeius humeralis*) from southern Florida. J. Mammal. **32** 1951 pp. 233–234.

1311.—Schwartz, C. W. A new record of *Zapus hudsonius* in Missouri and notes on its hibernation. J. Mammal. **32** 1951 pp. 227–228.

1312.—Schwarz, E. A new marmoset monkey from Brazil. Amer. Mus. Novit. No. 1508 1951 pp. 1–3.

1313.—Schweiger, J. and others. Zu Rundfrage um den Bilch. Ost. Weidw. **19–20** 1951 pp. 185–186 figs.

1314.—Scortecci, G. Biologia del Tibesti. Ann. Mus. libico Stor. nat. **2** 1940 pp. 257–275 2 figs.

1315.—Scott, C. Big game: the easier way. Country Life **109** 1951 pp. 1542–1543 5 figs.

1316.—Scott, C. Lions at home. Country Life **110** 1951 p. 1287.

1317.—Scott, J. H. The development of joints concerned with early jaw movements in the sheep. J. Anat. Lond. **85** 1951 pp. 36–43 1 pl. 1 fig.

1318.—Scott, J. P. and **Fredericson,** E. The causes of fighting in mice and rats. Physiol. Zoöl. **24** 1951 pp. 273–309 2 figs.

1319.—Scott, W. E. Wisconsin's first Prairie Spotted Skunk, and other notes. J. Mammal. **32** 1951 p. 363.

Scullard, H. H. *vide* Gowers.

1320.—Sealander, J. A. A technique for continuous recording of subcutaneous temperatures of wild mice. J. Mammal. **32** 1951 pp. 122–123 1 fig.

1321.—Sealander, J. A. Mountain Lion in Arkansas. J. Mammal. **32** 1951 p. 364.

1322.—Sealander, J. A. Jr. Lump-nosed Bat in Arkansas. J. Mammal. **32** 1951 p. 465.

1323.—Sealander, J. A. Jr. Survival of *Peromyscus* in relation to environmental temperature and acclimation at high and low temperatures. Amer. Midl. Nat. **46** 1951 pp. 257–311 7 figs.

Seitner, M. M. *vide* Smith.

1324.—Sellers, E. A., **Reichman,** S. and **Thomas,** N. Acclimatization to cold: natural and artificial. Amer. J. Physiol. **167** 1951 pp. 644–650.

1325.—Sellers, E. A., **Reichman,** S., **Thomas,** N. and **You,** S. S. Acclimatization to cold in rats: metabolic rates. Amer. J. Physiol. **167** 1951 pp. 651–655 2 figs.

1326.—Sellers, E. A., **You,** S. S. and **Thomas,** N. Acclimatization and survival of rats in the cold: effects of clipping, of adrenalectomy and of thyroidectomy. Amer. J. Physiol. **165** 1951 pp. 481–485.

Semenov-Tyan-Shanski, O. I. *vide* Nasimovitch.

1327.—Semenza, L. and **Satta,** L. Primi risultati sulla ereditarietà del colore del mantello nel cane (cocker spaniel). R.C. Ist. lombardo **83** Cl. Sci. mat. nat. 1950 pp. 580–588 6 figs.

1328.—Sergeant, D. E. The status of the common seal (*Phoca vitulina* L.) on the East Anglian coast. J. Mar. biol. Ass. U.K. **29** 1951 pp. 707–717 1 map.

Sessot, A. *vide* Junqueira.

1329.—Seth-Smith, D. The true Quagga. Field, Lond. **198** 1951 p. 340 1 fig.

1330.—Seth-Smith, D. White elephants. Field, Lond. **198** 1951 p. 653 1 fig.

1331.—[Severtzov, N. A.] [Periodical phenomena in life of mammals, birds, amphibians and reptiles of Voronesh province.] Moscow 1950 pp. 1–308 1 pl. 2 figs. map. [In Russian.]

1332.—Shadle, A. R. Laboratory copulations and gestations of Porcupine, *Erethizon dorsatum*. J. Mammal. **32** 1951 pp. 219–221.

1333.—Shaner, R. F. Complete and corrected transposition of the aorta, pulmonary artery and ventricles in pig embryo, and a case of corrected transposition in a child. Amer. J. Anat. **88** 1951 pp. 35–62 13 figs.

Shanklin, W. M. *vide* Kazzaz.

Shaw, T. R. *vide* Hooper.

1334.—Sheppard, R. W. An Otter at Niagara Falls. Canad. Field Nat. **65** 1951 pp. 82–83.

1335.—Sherman, H. B. Aberrant color phases of the Cotton Rat, *Sigmodon*. J. Mammal. **32** 1951 p. 217.

1336.—Shields, C. St. B. Swimming hares. Field, Lond. **198** 1951 p. 30.

1337. — [Shilova - Krassova, S. A.] [Food of the badger in Buzuluk Forest.] Zool. J. Moscow **30** 1951 pp. 286–288. [In Russian.]

Shorland, F. B. *vide* Bruce.

1338.—Shorten, M. (Mrs. Vizoso). Some aspects of the biology of the grey squirrel (*Sciurus carolinensis*) in Great Britain. Proc. Zool. Soc. Lond. **121** 1951 pp. 427–459 1 pl. 2 figs.

Shvartz, S. S. *vide* Pavlinin.

Sicher, H. *vide* Kutuzov.

Siers, M. R. *vide* Higginbotham.

1339.—Sierts, W. Os clitoridis von *Zalophus californianus* Less. und *Sciurus vulg. fuscoater* Altum. Zool. Anz. **145** Erganzungsb. 1950 pp. 938–939 1 fig.

Sierts-Roth, U. *vide* Falconer.

1340.—Siivonen, L. [The taxonomy of the house mouse is stabilizing.] Luonnon Tutk. **54** 1950 p. 125.

1341.—Siivonen, L. Kenttämyyrän (*Microtus arvalis*) joukkoesüntyminen Helsingin seudussa. Luonnon Tutk. **55** 1951 pp. 72–76 4 figs.

1342.—Simm, K. [*Crocidura mimula* Miller 1901 in Poland (Mammalia, Insectivora, Soricidae)]. Sprw. Poznán Tow. Przyj. Nauk. **2** 1949 pp. 293–294. [In Polish.]

1343.—Simpson, G. G. Some principles of historical biology bearing on human origins. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 55–66.

1344.—Simpson, G. G. Hayden, Cope, and the Eocene of New Mexico. Proc. Acad. nat. Sci. Philad. **103** 1951 pp. 1–21 5 pls.

1345.—Simpson, G. G. Horses—the story of the Horse family in the modern world and through sixty million years of history. New York 1951 pp. x + 247 32 pls. 34 figs.

1346.—Simpson, G. G. American Cretaceous Insectivores. Amer. Mus. Novit. 1541 1951 pp. 1–19 7 figs.

1347.—Sinclair, J. G. The terminal olfactory complex in the porpoise. Texas J. Sci. **3** 1951 p. 251.

1348.—[Skalon, V. N.] [Some economic mammals of Bodaybinsk district in Irkutsk area.] Bull. Soc. Nat. Moscow sect. biol. **56** 1 1951 pp. 27–32. [In Russian.]

1349.—Skuncke, F. Älgen, studier, jakt och vard. Stockholm 1949 pp. 400 201 figs.

1350.—Slais, J. Molybdenový haematoxylin v histologii. Mem. Soc. zool. tchéosl. **15** 1951 pp. 201–207.

1351.—Slijper, E. J. On the hump of the zebu and zebu-crosses. Hemera Zoa **58** 1951 1–2 pp. 5–47 15 figs.

1352.—Sloan, J. E. N. A note on the occurrence of *Trichostrongylus retortaeformis* in the blackbuck (*Antilope cervicapra*). Proc. zool. Soc. Lond. **121** 1951 pp. 723–725.

1353.—Sluiter, J. W. and **Bels,** L. Follicular growth and spontaneous ovulation in captive bats during the hibernation period. Proc. Acad. Sci. Amst. **54C** 1951 pp. 585–593 1 pl.

1354.—Sluiter, J. W. and **Bouman,** M. Sexual maturity in bats of the genus *Myotis*. I. Size and histology of the reproductive organs during hibernation in connection with age and wear of the teeth in female *Myotis myotis* and *Myotis emarginatus*. Proc. Acad. Sci. Amst. **54C** 1951 pp. 594–602 1 pl. 14 figs.

1355.—Smit, P. Domesticatieverschijnselen. Vakbl. Biol. **31** 1951 pp. 101–114.

Smith, C. A. M. *vide* Willan.

1356.—Smith, C., **Seitner,** M. M. and **Wang,** H. P. Aging changes in the tunica media of the aorta. Anat. Rec. **109** 1951 pp. 13–40 24 figs.

1357.—Smith, C. F. A burrow of the pocket gopher (*Geomys bursarius*) in Eastern Kansas. Trans. Kans. Acad. Sci. **51** 1948 pp. 313–315 1 fig.

1358.—Smith, D. E., **Svihla,** G. and **Patt,** H. M. The effects of X-radiation on circulation in the wing of the bat. Physiol. Zoöl. **24** 1951 pp. 249–257.

1359.—Smith, F. and **Grenan,** M. M. Effect of hibernation upon survival time following whole-body irradiation in the marmot (*Marmota monax*). Science **113** 1951 pp. 686–688 tables.

1360.—Smith, F. D. and **Wilcox,** B. Keeping out the rabbit. Field, Lond. **197** 1951 p. 877 1 fig.

1361.—Smith, G. Vegetarian otter ? Field, Lond. **198** 1951 p. 224.

Smith, H. H. *vide* Hume.

Smith, V. W. *vide* Chase.

1362.—Smith, W. I. and **Ross,** S. Avitaminosis and social dominance in male C3H mice. Physiol. Zoöl. **24** 1951 pp. 238–241.

Smithburn, K. C. *vide* Haddow.

1363.—Snell, G. D. and **Higgins,** G. F. Alleles at the histocompatibility-2 locus in the mouse as determined by tumor transplantation. Genetics **36** 1951 pp. 306–310.

1364.—Sody, H. J. V. Mammalia. De Plagen van de Cultuurgewassen in Indonesie **2** 1951 pp. 988–1016 1 col. pl. 11 figs.

1365.—Soergel, W. Der Klimacharakter des Mammuts. Paläont. Z. **22** 1941 pp. 29–55.

1366.—Soergel, W. Rentiere des deutschen Alt- und Mitteldiluviums. Paläont. Z. **22** 1941 pp. 387–420 10 figs.

1367.—[Soldatenkov, P. F.] [Absorption of carbohydrates in the alimentary tract of sheep.] J. Gen. Biol. Moscow **12** 1951 pp. 346–362 8 figs. [In Russian.]

1368.—Sonnenschein, A. Die Evolution des Kniegelenkes innerhalb der Wirbeltierreihe. Acta Anat. **13** 1951 pp. 288–328 12 figs.

1369.—Soper, J. D. The mammals of Elk Island National Park, Alberta. Wildl. Mgnt. Bull. Can. (1) **3** 1951 pp. 1–24 4 figs. 1 map.

1370.—Spahni, J.-C. Les grottes à ours des cavernes (*Ursus spelaeus*) de Tanay sur Vouvry (Valais). Bull. Soc. vaud. Sci. nat. **65** 279 1951 pp. 127–145 7 figs.

1371.—Sparre, T. Recovery of oil from Whale glue-water. Summary report on experiments carried out at Steinshamn October 1950. Norsk Hvalfangsttid **40** 1951 pp. 377–383.

1372.—Speed, J. G. and **Etherington,** M. G. A note on the history of British horses in the light of recent investigations. Vet. Rec. **62** 1950 pp. 624–625.

Spencer, M. M. *vide* Barnett.

1373.—Sprugel, G. Jr. Spring dispersal and settling activity of Central Iowa muskrats. Iowa St. Coll. J. Sci. **26** 1 1951 pp. 71–84 2 figs.

1374.—Spuler, H. Über das Tuber cinereum des Meerschweinchens und seine topographischen Beziehungen zum Infundibulum. Acta Anat. **13** 1951 pp. 125–162 18 figs.

1375.—Stach, J. *Arctomeles pliocaenicus* n. g. and n. sp. from Weze. Acta Geol. Polon. **2** 1–2 1951 pp. 129–148 4 pls. 3 figs. [Conspectus, pp. 51–63.]

1376.—Stager, K. E. and **Reeder,** W. G. Contributions from Los Angeles County Museum—Channel Islands Biological Survey. No. 35. Occurrence of the false killer whale *Pseudorca*, on the California coast. Bull. S. Calif. Acad. Sci. **50** 1951 pp. 14–20 5 figs.

1377.—Stanford, J. K. Crab-eating Chital. J. Bombay nat. Hist. Soc. **50** 1951 pp. 398–399.

1378.—Staubesand, J. Über verschiedene Typen arterio-venöser Anastomosen. Verh. anat. Ges. Jena **48** 1951 pp. 68–75 5 figs.

1379.—Stehlin, H. G. and **Schaub,** S. Die Trigonodontie der Simplicidentaten Nager. Schweiz Pal. Abhandl. **67** 1950 [1951] pp. 2–385 620 figs.

1380.—Stein, A. H. S. Melanistic hare. Field, Lond. **198** 1951 p. 154.

1381.—Stein, G. H. W. Populationsanalytische Untersuchungen am europäischen Maulwurf. II. Über zeitliche Grossenschwankungen. Zool. Jb. (Syst.) **79** 1951 pp. 567–590 3 figs.

1382.—Steinbacher, G. Nüsse öffnender Sumpfichneumon. Zool. Gart. Lpz. (N.F.) **18** 1951 p. 58.

1383.—Steinbacher, G. Kleine Beobachtungen am Hermelin, *Mustela erminea* L. Zool. Gart. Lpz. (N.F.) **18** 1951 p. 61.

1384.—Steiniger, F. Jahreszeitliche und sonstige Veränderungen im Tagesrhythmus der Wanderratte. Dtsch. Zool. Z. **1** 1951 pp. 142–146 1 fig.

1385.—Steiniger, F. Revier und Aktionsraum bei der Wanderratte. Z. Hyg. Zool. München **39** 1951 pp. 33–50.

1386.—Steiniger, F. Über Driftmarkierung bei der Wanderratte. Z. Hyg. Zool. München **38** 1950 pp. 357–361.

1387.—Stephen, H. Vergleichende Untersuchungen über den Feinbau des Hirnes von Wild- und Haustieren (nach Studien am Schwein und Schaf). Zool. Jb. (Anat.) **71** 1951 pp. 487–586 52 figs.

1388.—Stephen, A. C. Immigration of certain animals to Scottish waters since 1913. [Rep.] Challenger Soc. **3** 3 1951 p. 14.

1389.—Stephensen, W. The Lesser Rorqual in British waters. Rep. Dove Mar. Lab. [1949] 1951 pp. 7–48 15 figs.

1390.—Sternberg, C. M. White Whale and other Pleistocene fossils from the Ottawa Valley. Bull. nat. Min. Can. No. 123 1951 pp. 259–261 1 fig.

1391.—Stevenson-Hamilton, J. Albinism among lions. Field, Lond. **197** 1951 p. 358.

1392.—Stevenson-Hamilton, J. Albinism among lions. Field, Lond. **198** 1951 p. 262.

1393.—Stewart, T. D. The problem of the earliest claimed representatives of *Homo sapiens*. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 97–107.

1394.—Stewart, T. D. Antiquity of man in America demonstrated by the fluorine test. Science **113** 1951 pp. 391–392.

1395.—Stickel, W. H. Occurrence and identification of the prairie deermouse in Central Maryland. Proc. biol. Soc. Wash. **64** 1951 pp. 25–31 figs.

1396.—Stieve, H. Ist die Nebenbrunst der Tiere mit verlängerter Tragzeit eine Scheinbrunst ? Zool. Anz. **145** Erganzungsb. 1950 pp. 970–979.

Stiles, W. S. *vide* Gunter.

1397.—Stirton, R. A. Ceboid Monkeys from the Miocene of Colombia. Univ. Calif. Pub. Bull. Dep. Geol. Sci. **28** 1951 pp. 315–356 8 pls. 2 figs.

1398.—Stirton, R. A. Principles in correlation and their application to later Cenozoic holarctic continental mammalian faunas. 18th Rep. Internat. Geol. Congress **11** 1951 pp. 74–84.

1399.—Stirton, R. A. and **Savage,** D. E. A new monkey from the La Venta late Miocene of Colombia. Minist. Min. Petrol. Serv. Geol. Nac., Comp. Est. Geol. Ofic. Colombia **7** [1950] 1951 pp. 345–346 7 pls. [N.V.]

Stitt, M. *vide* George.

Stoa, K. *vide* Boe.

1400.—Stock, C. *Neohipparion leptode* (Merriam) from the Pliocene of Northwestern Nevada. Amer. J. Sci. **249** 1951 pp. 430–438 6 pls. 2 figs.

1401.—Stockley, C. H. Swamp Deer. Zoo Life, Lond. **6** 1951 pp. 29–31.

1402.—Stockley, C. H. Can the Kashmir Red Deer survive ? Zoo Life, Lond. **6** 1951 pp. 88–89 1 fig.

1403.—Stolte, H.-A. Über Entwicklung und Vererbung des Temperamentes wilder und domestizierter Kaninchen. Zool. Anz. **145** Erganzungsb. 1950 pp. 980–999 2 figs.

1404.—Stoner, D. Extant New York State specimens of the Adirondack cougar. Circ. N.Y. St. Mus. No. 25 1950 pp. 1–34 12 figs.

1405.—Storey, W. F. and **Leblond,** C. P. Measurement of the rate of proliferation of epidermis and associated structures. Ann. N.Y. Acad. Sci. **53** 1951 pp. 537–545 4 figs.

1406.—Stormont, C., **Owen,** R. D. and **Irwin,** M. R. The B and C systems of bovine blood groups. Genetics **36** 1951 pp. 134–161.

1407.—Story, H. E. The carotid arteries in the Procyonidae. Fieldiana: Zoology **32** 1951 pp. 475–577 figs. 82–98.

1408.—Strandskov, H. H. Genetics and the origin and evolution of man. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 1–11.

Stratton, G. B. *vide* Vevers.

Strecker, R. L. *vide* Emlen.

1409.—Strinati, P. Note sur les Chauves-Souris du Maroc. Mammalia, Paris **15** 1951 pp. 23–31.

1410.—Stroganov, S. V. [Mammals in] Trav. zool. Inst. Acad. Sci. U.S.S.R. **7** 1948 p. 129 [N.V.]

1411.—[Stroganova, A. S. and **Yudin,** K. A.] [*Citellus fulvus* Licht. and *Lepus europaeus* Pall. as forestry pests in Trans-Volga region.] Zool. J. Moscow **30** 1951 pp. 106–110 3 figs. [In Russian.]

Strong, L. C. *vide* Hollander.

1412.—Struad, V. Dva paleobiologické doklady z Barové jeskyěn u Adamova. Přír. Sborn. Ostrav. Kraje **10** 1949 pp. 410–411 1 pl. [English summary.]

Subrahmanyan, K. K. *vide* Reddy.

Sukegawa, N. *vide* Harada.

Sumikawa, S. *vide* Hiraiwa.

1413.—Suomalainen, P. and **Härma,** R. Heparinocytes and hibernation. Experientia **7** 1951 p. 380.

1414.—Suomalainen, P. and **Herlevi,** A.-M. The hibernating gland and the alarm reaction. Arch. Soc. Zool. Bot. Fenn. Vanamo **5** 2 1951 pp. 72–73.

1415.—Suomalainen, P. and **Herlevi,** A.-M. The alarm reaction and the hibernating gland. Science **114** 1951 p. 300.

1416.—Suomalainen, P. and **Sarajas,** S. Heart-beat of the hibernating hedgehog. Nature, Lond. **168** 1951 p. 211.

1417.—Suomalainen, P. and **Sarajas,** S. The heart rate in the hibernating hedgehog. Ann. zool. Soc. zool-bot. Vanamo **14** No. 2 1951 pp. 1–8 4 figs.

1418.—Suomalainen, P. and **Vorpio,** P. Suomen selkärankaiset—Vertebrata fennica. Luonnon Tutk. **54** 3 1950 pp. [1–8].

1419.—Sutton, K. Some proboscidian remains found in Henry County. Proc. Iowa Acad. Sci. **57** [1951] pp. 533–534 1 map.

1420.—Suvatti, C. Fauna of Thailand, Bangkok (Dept. of Fisheries) 1950 pp. ii + 1100 frontis. [Mammals pp. 522–602.]

Sverdrup, A. *vide* Boe.

1421.—Svihla, A., **Bowman,** H. R. and **Ritenour,** R. Prolongation of clotting time in dormant estivating mammals. Science **114** 1951 pp. 298–299 1 table.

Svihla, G. *vide* Smith.

1422.—[Sviridenko, P. A.] [Theoretical disagreements on the role of the smell receptor in rodents and their applied fraction.] Zool. J. Moscow **30** 1951 pp. 344–351. [In Russian.]

1423.—Swanson, C. V. The Introduced White-tailed Deer in Southeastern Washington. Murrelet, Seattle **31** 1951 pp. 43–44.

1424.—Swanson, C. V. A technique for age determination of Elk (*Cervus canadensis*). Murrelet, Seattle **32** 1951 pp. 19–22 figs.

Swayne, J. R. *vide* Gersbacher.

1425.—Swenson, L. E. A field preservative for small mammals. J. Colo-Wyo. Acad. Sci. **4** 3 1951 p. 78.

1426.—Swynnerton, G. H. and **Hayman,** R. W. A Check List of the Land Mammals of the Tanganyika Territory and the Zanzibar Protectorate. J. E. Afr. Nat. Hist. Soc. **20** 1951 pp. 274–392.

1427.—Takewaki, K. Simultaneous intrasplenic and subcutaneous ovarian transplants in the mouse. Annot. zool. jap. **23** 1950 pp. 89–92 1 pl.

1428.—Tamino, G. Il movimento dei Pinnipedi. Arch. zool. Torino **36** 1951 pp. 341–353 8 figs.

1429.—Tanaka, R. Estimation of vole and mouse populations on Mt. Ishizuchi and on the uplands of southern Shikoku. J. Mammal. **32** 1951 pp. 450–458 3 figs.

1430.—Tanaka, R. A comparative study on Formosan common rats and mice of four species belonging to the genera *Rattus*, *Apodemus*, and *Mus* from the standpoint of variation-statistics, 1951. [N.V. English version, with revision, of 1944 paper of same title. Review J. Mammal. **32** 1951 pp. 477–478.]

1431.—Tate, G. H. H. Results of the Archbold Expeditions. No. 65. The rodents of Australia and New Guinea. Bull. Amer. Mus. Nat. Hist. **97** 1951 pp. 183–430 4 figs.

1432.—Tate, G. H. H. The Banded Anteater, *Myrmecobius* Waterhouse (Marsupialia). Amer. Mus. Novit. No. 1521 1951 pp. 1–8.

1433.—Tate, G. H. H. *Harpyionycteris*, a genus of rare fruit bats. Amer. Mus. Novit. No. 1522 1951 pp. 1–9 4 figs.

1434.—Tate, G. H. H. A second specimen of the Papuan earless water rat, *Crossomys moncktoni*. Amer. Mus. Novit. No. 1523 1951 pp. 1–4 3 figs.

1435.—Tate, G. H. H. The Wombats (Marsupialia, Phascolomyidae). Amer. Mus. Novit. No. 1525 1951 pp. 1–18.

1436.—Tate, G. H. H. Notes on Australian marsupials rare or little-known in the United States. Amer. Mus. Novit. No. 1528 1951 pp. 1–6.

1437.—Tate, G. H. H. The nomenclature of *Canis antarcticus*. J. Mammal. **32** 1951 p. 126.

Tateishi, S. *vide* Makino.

1438.—Taylor, A. C. and **Butcher,** E. O. The regulation of eruption rate in the incisor teeth of the white rat. J. exp. Zool. **117** 1951 pp. 165–188 9 figs.

Taylor, S. H. *vide* Eayrs.

1439.—Tazeb, M. A. F. Les cavités nasales, le larynx, les organes annexes de l'appareil respiratoire du chameau. Rev. Élev. **4** 1950 pp. 21–24 4 figs.

1440.—Tazeb, M. A. F. Les muscles de la tête du chameau. Rev. Elev. **4** 1950 pp. 145–149 2 figs.

1441.—Tazeb, M. A. F. L'appareil glandulaire de la tête du Chameau. Rev. Elev. **4** 1950 pp. 151–155 2 figs.

1442.—Tazeb, M. A. F. La cavité buccale du chameau. Rev. Elev. **4** 1950 pp. 157–160 2 figs.

1443.—[Tcherkasski, E. S.] [Susceptibility of *Ondatra* to tularemia and its immunisation.] Zool. J. Moscow **30** 1951 pp. 636–640. [In Russian.]

1444.—Tebbutt, C. F. For the hedgehog. Field, Lond. **198** 1951 p. 112.

1445.—Tegner, H. The Roe Deer, their history, habits and pursuit. London 1951 pp. 176 24 figs.

1446.—Tegner, H. The Broom Park head. Field, Lond. **198** 1951 p. 300 1 fig.

1447.—Tegner, H. The rutting rings of roe deer. Country Life **109** pp. 262–263.

1448.—Tegner, H. S. Museum of sporting trophies ? Country Life **109** 1951 pp. 1726–1728.

1449.—Tegner, H. A plea for roe deer. Country Life **110** 1951 pp. 283–284.

1450.—Tegner, H. A remarkable Stag's head. Country Life **110** 1951 p. 578 1 fig.

1451.—Teichmann, K. Zur vergleichenden mikroskopischen Anatomie des Rückenmarkes der Säuger. Lotos **88** 1942 pp. 23–45 5 figs.

1452.—Teir, H. Experimental alterations of cell size and mitotic activity in the outer orbital gland of the white rat. I. Patho-physiological investigations. Comment. biol. Helsingfors **13** 1 1951 pp. 1–32 14 figs.

1453.—Teir, H. Experimental alterations of cell size and mitotic activity in the outer orbital gland of the white rat. II. Influence of tissue degeneration in other organs and tissues. Comment. biol. Helsingfors **13** 6 1951 pp. 1–16 2 pls.

1454.—Temperley, G. W. The range of grey squirrels. Field, Lond. **198** 1951 p. 1103.

1455.—Tenius, K. Systematische Beobachtung der Kleinsäuger als wichtige Ausgabe der niedersächsischen Heimatforschung. Beitr. Naturk. Niedersachs. No. 1 1948 pp. 13–19.

1456.—Tenius, K. Vom Fang und Präparieren der Kleinsäuger. Beitr. Naturk. Niedersachs. No. 3 1948 pp. 3–7.

1457.—Tétry, A. Le système sanguin Rhesus, Paris (Albin Michel) 1950 pp. vi + 243 26 figs.

Tevis, L. *vide* Leopold.

1458.—Theiler, K. Die Entwicklung der Zwischenwirbelscheiben bei der Short-Danforth-Maus. Rev. suisse Zool. **58** 1951 pp. 484–488 4 figs.

1459.—Thenius, E. Ergebnisse der Neuuntersuchung von *Miophoca vetusta* Zapfe (Phocidae, Mammal.) aus dem Torton des Wiener Beckens. Anz. öst. Akad. Wiss. **87** 1951 pp. 99–107 1 fig.

1460.—Thenius, E. Die Cerviden und Lagomerycidien des steirischen Tertiärs. Vorläufige Mitteilung. Anz. öst. Akad. Wiss. **87** 1951 pp. 110–116.

1461.—Thenius, E. Über den Nachweis von *Anchitherium aurelianense* im Pannon des Wiener Beckens. Anz. öst. Akad. Wiss. **87** 1951 pp. 174–181 2 figs.

1462.—Thenius, E. Die Boviden (Mammalia) des Wiener Jungtertiärs. Anz. öst. Akad. Wiss. **88** 1951 pp. 179–180.

1463.—Thenius, E. Uber das Vorkommen von *Trimylus schlosseri* (Soricidae, Mammal.) im Pannon des Wiener Beckens. Anz. öst. Akad. Wiss. **88** 1951 pp. 278–282 fig.

1464.—Thenius, E. Die neuen paläontologischen Ausgrabungen in Hundscheim (NÖ.). Anz. öst. Akad. Wiss. **88** 1951 pp. 341–343.

1465.—Thenius, E. Die Rhinocerotiden (Mammalia) des Wiener Jungtertiärs. Anz. öst. Akad. Wiss. **88** 1951 pp. 343–347.

1466.—Thenius, E. Ergebnisse paläontologischer Untersuchungen an den Boviden (Mammal.) des Wiener Beckens. Neues Jhb. Geol. Pal. Monats. (B) 9 1951 pp. 273–282.

1467.—Thenius, E. *Anthracotherium* aus dem Untermiozän der Steiermark. Beiträge zur Kenntnis der Säugetierreste des steirischen Tertiärs. VI. S.B. öst. Akad. Wiss. Abt. I **160** 1951 pp. 217–226 1 fig.

1468.—Thenius, E. Eine neue Rekonstruktion des Höhlenbären (*Ursus spelaeus* Ros.). S.B. öst. Akad. Wiss. Abt. I **160** 1951 pp. 321–333 3 pls.

1469.—Thigpen, L. W. Inheritance—distribution, pattern, quality, and quantity. Ann. N.Y. Acad. Sci. **53** 1951 pp. 674–681.

Thomas, B. O. *vide* Petrides.

Thomas, D. P. *vide* Le Gros Clark.

Thomas, N. *vide* Sellers.

1470.—Thompson, H. V. Rabbits and other rodents. Ann. appl. Biol. **38** 1951 pp. 725–727.

1471.—Thompson, H. V. and **Armour,** C. J. Control of the European Rabbit (*Oryctolagus c. cuniculus* L.). An experiment to compare the efficiency of gin trapping, ferreting and cyanide gassing. Ann. appl. Biol. **38** 1951 pp. 464–474 3 figs.

1472.—Tiburtius, G. Sôbre a occurrência de bula timpânica, de baleia e artefatos derivados nos sambaquês dos estados do Paraná e Santa Catarina. Arq. Biol. Tecnol. Curitiba **4** 1949 pp. 87–94 9 pls. 3 figs.

Tikhomirov, B. A. *vide* Portenko.

1473.—Tipper, H. W., **Jizba,** Z. V. and **Konizeski,** R. L. A bison from eastern Washington. Amer. J. Sci. **249** 1951 pp. 318–322 1 fig.

1474.—Tomkinson, M. R. Game law for Kenya. Field, Lond. **198** 1951 p. 188.

1475.—Töndury, G. and **Cagianut,** B. Zur Wirkung der Sexualhormone auf Wachstum und Differenzierung. Biol. Rev. **26** 1951 pp. 28–58 13 figs.

1476.—Torre, L. de la. A method for cleaning skulls of specimens preserved in alcohol. J. Mammal. **32** 1951 pp. 231–232.

1477.—Toschi, A. Mammiferi della Libia. Suppl. Ric. Zool. Applic. Caccia Bologna **2** 1951 pp. 137–177 4 figs.

1478.—Toschi, A. Sulla individualita zoogeografica della sottoregione dell' Africa Orientale Settentrionale. Riv. Biol. Colon. **8** 1947 pp. 3–11.

1479.—Toth, G. Zur Kenntnis des österreichischen Miozäns. IV. Neue Robbenreste aus dem Torton des Wiener Beckens. Ann. naturh. Mus. Wien **57** 1950 pp. 173–178 1 fig.

1480.—Transehe, N. v. Kamele und Rentiere in der Sowjetunion. Zool. Gart. Lpz. **18** 1951 pp. 150–151.

1481.—Tressler, D. K. and **Lemon,** J. McW. Marine products of commerce. 2nd edn. N.Y. 1951 pp. i–xiii, 1–782 figs.

1482.—[Trofimov, B. A.] [The fossil pigs belonging to the genus *Microstonyx*.] C.R. Acad. Sci. URSS N.S. **76** 1951 pp. 881–884 2 figs. [In Russian.]

1483.—Troughton, E. The Kangaroo family. The Pademelons or Scrub-Wallabies. I. pp. 218–222 2 figs. II. pp. 261–264 1 fig. Aust. Mus. Mag. **10** 1951.

1484.—Trump, R. F. Home range of the Southern Woodchuck. Proc. Iowa Acad. Sci. **57** (1951) pp. 537–540.

Truyols Santonja, J. *vide* Crusafont Pairo.

1485.—Tryon, C. A. Jr. The use of skull measurements at the subspecific level in mammalian taxonomy, with special reference to *Thomomys talpoides*. J. Mammal. **32** 1951 pp. 313–318.

1486.—Tschumi, O. Urgeschichte der Schweiz. **1** 1949 Zurich pp. 751 281 figs. [Mammals pp. 121–368, **Hescheler,** K. and **Kuhn,** E.]

1487.—Tulloch, A. An extraordinary find in a panther's stomach. J. Bombay nat. Hist. Soc. **49** 1951 pp. 775–776 1 fig.

1488.—Twente, J. W. and **Baker,** R. H. New records of mammals from Jalisco, Mexico, from barn owl pellets. J. Mammal. **32** 1951 pp. 123–121.

1489.—Twiesselmann, F. Les représentations de l'homme et des animaux quaternaires découvertes en Belgique. Revision des documents déja connus et description de documents inédits. Mém. Inst. Sci. nat. Belg. No. 113 1951 pp. 1–28 10 pls. 8 figs.

1490.—[Tzalkin, V. I.] [Contribution to the history of the Lithuanian bison.] C.R. Acad. Sci. URSS N.S. **77** 1951 pp. 349–352. [In Russian.]

1491.—[Tzalkin, V. I.] [The aboriginal stag of Western White Russia.] C.R. Acad. Sci. URSS N.S. **77** 1951 pp. 521–523. [In Russian.]

1492.—[Tzalkin, V. I.] [New data on distribution of *Equus hemionus* in historical times.] C.R. Acad. Sci. URSS N.S. **81** 1951 pp. 289–291. [In Russian.]

1493.—[Tzalkin, V. I.] [The mountain sheep of Europe and Asia.] Tabl. Anal. Faun. U.S.S.R. Zool. No. 27 **42** 1951 pp. 343. [N.V. Review Zool. J. Moscow **31** 1952 pp. 483–486. In Russian.]

1494.—Ulmer, F. A. Jr. Unusual behavior of the Norway Rat. J. Mammal. **32** 1951 pp. 117–118.

1495.—Ulmer, F. A. Jr. Notes on the Rice Rat in New Jersey and Pennsylvania. J. Mammal. **32** 1951 pp. 121–122.

1496.—Unger, K. Über Altersveränderungen in den Grenzstrang-Ganglien der Ratte. Anat. Anz. **98** 1951 pp. 13–23 3 graphs.

1497.—Urbain, A., **Nouvel,** J., **Bullier,** P. and **Rinjard,** J. Rapport sur la mortalité et la natalité enregistrées au Parc Zoologique du Bois de Vincennes pendant l'année 1950. Bull. Mus. Hist. nat. Paris (2) **23** 1951 pp. 157–172.

1498.—Urry, A. Additional notes on the Knysna Elephants. African Wild Life **5** 1951 pp. 200–201.

1499.—Vacquié, P. Les elephants du cercle de Nioro (Soudan). Notes afr. No. 47 1950 pp. 98–99 1 fig.

1500.—Van Arsdel, W. C. III and **Hillemann,** H. H. The ossification of the middle and internal ear of the golden hamster (*Cricetus auratus*). Anat. Rec. **109** 1951 pp. 673–689 4 figs.

van Arsdel, W. C. *vide* Beyerlein.

1501.—van der Horst, C. J. The post-partum involution of the uterus of *Elephantulus*. Acta zool. Stockh. **32** 1951 pp. 11–29 16 figs.

1502.—van der Horst, C. J. A case of interstitial implantation in *Elephantulus*. S. Afr. J. Sci. **47** 1951 pp. 164–167 3 figs.

van Dyke, H. B. *vide* Ames.

1503.—van Weel, P. B. On the secretion and excretion by the hepatic cell of albino mice. Physiol. Zool. **24** 1951 pp. 367–378 4 figs.

1504.—Varicak, T. Die intrahepatischen multiplen Sperreinrichtungen im Bereiche der Lebervenen bei einigen Arctoidea. Glasn. hrv. prirodosl. Dr. (2B) **2** 1950 pp. 106–117 1 pl. 1 fig.

1505.—Vaughan, L. E. Kafue National Park progress report. African Wild Life **5** 1951 pp. 95–97 map.

1506.—Vauk, G. Über den Einfluss der Domestikation auf die Körpertemperatur und deren Beziehungen zur Jodzahl des Fettes. Zool. Anz. **147** 1951 pp. 71–79.

Vauk, G. *vide* Jaeschke.

1507.—Veiga-Ferreira, M. C. Notas acêrca dos megaquirópteros da Guiné Portuguesa. Ann. Jta. Invest. colon. Lisboa **3** 1948 pp. 55–73 3 figs.

1508.—Veiga-Ferreira, M. C. Notas acerca dos microquirópteros da Guiné Portuguesa. Ann. Jta. Invest. colon. Lisboa **4** 1949 pp. 187–207 5 figs.

1509.—Vellard, J. Résistance de la Mouffette andine au venin de serpent. Trav. Inst. français études andines **2** 1951 pp. 19–38. [N.V.]

1510.—Vendrely, C. and **Kayser,** C. Recherches sur le fonctionnement du système nerveux des hibernants. Différences entre le comportement du hamster ordinaire (*Cricetus frumentarius*) et le spermophile (*Citellus citellus*). C.R. Soc. Biol. Paris **145** 1951 pp. 1123–1126.

Venge, O. *vide* Johansson.

1511.—[Vereshtchagin, N. K.] [Remains of dogs and beavers (Mammalia, *Canis, Castor, Trogonotherium*) in the Lower Pleistocene of the western Caucasus.] C.R. Acad. Sci. URSS N.S. **80** 1951 pp. 821–824 3 figs. [In Russian.]

1512.—Verheyen, R. Exploration du Parc National de l'Upemba. Contribution à l'étude éthologique des mammifères du Parc National de l'Upemba. Inst. Parcs Nat. Congo Belge, Brussels 1951 pp. 1–161 20 pls.

1513.—Vértes, L. L'abri II. de Pilisszántó. Orz. term-tud. Muz. Évk. **1** 1951 pp. 223–232 5 figs.

1514.—Vevers, G. M. and **Stratton,** G. B. Père David's Deer in the collection of the Zoological Society of London. Proc. Zool. Soc. Lond. **121** 1951 p. 325.

1515.—Vieira, C. O. da C. Notas sobre os mamiferos obtidos pela expedicao do Instituto Butanta as Rio das Mortes e Serra do Roncador. Pap. Dep. zool. Sec. Agric. S. Paulo **10** 1951 pp. 105–125.

1516.—Vietinghoff-Riesch, F. von. Rauharmige und Grossohrige Fledermaus in der Umgebung von Hannover. Beitr. Naturk. Niedersachs. **4** 3 1951 p. 65.

1517.—Vietinghoff-Riesch, A. F. v. and **Xylander,** E. v. Beobachtungen am Siebenschläfer (*Glis glis* L.) im Deister. Beitr. Naturk. Niedersachs. **3** 1950 pp. 29–25.

Village, P. A. *vide* Wotton.

Villalta, J. F. de *vide* Crusafont Pairo.

Villiers, A. *vide* Dekeyser.

Vincent, J. *vide* Fitzsimons.

1518.—Vinton, K. W. Bungalow-building Bats. Nat. Hist. N.Y. **60** 1951 pp. 278–279 3 figs.

1519.—Viret, J. *Meles thorali* n. sp. du loess villafranchien de Saint-Vallier (Drome). Eclog. geol. Helvet. **43** 1951 pp. 274–287 6 figs.

1520.—Viret, J. Catalogue critique de la faune des mammifères Miocènes de la Grive Saint-Alban (Isère). Nouv. Arch. Mus. Hist. nat. Lyon No. 3 1951 pp. 1–104 4 pls. 23 figs.

Viret, J. *vide* Schaub.

1521.—Vitumo, A. The development of the aortic arches in the horse. Amer. J. vet. Res. **12** 42 1951 pp. 26–30 5 figs.

Vizoso, Mrs. *vide* Shorten.

1522.—Vogel, H. Agglutinins and agglutinogens in the blood of wild animals. Zoologica, N.Y. **36** 1951 pp. 203–211 3 tabs.

1523.—Vogelberg, L. and **Krüger,** F. Versuche über die Richtungsorientierung bei weissen Mäusen und Ratten. Z. Tierpsychol. **8** 1951 pp. 293–321 43 figs.

1524.—Vogtman, D. B. and **Fitzwater,** W. D. Jr. Post mortem studies of some mammals of the Hollandia area, Netherlands New Guinea. J. Mammal. **32** 1951 pp. 211–215.

1525.—Voipio, P. Oravan värityspeistä Suomessa. Luonnon Tutk. **55** 1951 pp. 7–13 4 figs.

1526.—Voipio, P. Mustarotasta (*Rattus rattus*) Suomessa. Luonnon Tutk. **55** 1951 pp. 76–81 2 figs.

1527.—Voipio, P. Eine für Finnland neue form der Hausratte, *Rattus rattus* (L.). Arch. Soc. zool.-bot. fenn. Vanamo **6** 1951 pp. 24–29 1 fig.

Voipio, P. *vide* Suomalainen.

1528.—[Volshina, N. G.] [Variations of the hair coat of Chiroptera.] Bull. Soc. Nat. Moscow ser. biol. **56** (4) 1951 pp. 21–30 54 figs. [In Russian.]

1529.—Voss, G. Messend-zoologische Untersuchungen an Ovarien verschiedener Schafrassen. Zool. Anz. **145** Erganzungsb. 1950 pp. 1028–1056.

1530.—Wachtendorf, W. Beiträge zur Ökologie und Biologie der Haselmaus (*Muscardinus avellanarius*) im Alpenvorland. Zool. Jb. (Syst.) **80** 1951 pp. 189–204 9 figs.

Wachtendorf, W. *vide* Kahmann.

Wada, M. *vide* Aoki.

1531.—Waersegger, L. de. Faune congolaisé et protection de la faune Africaine. Zooleo N.S. No. 9 1951 pp. 3–10 1 pl.

Walberg, F. *vide* Blackstad.

1532.—Waldner, F. Ueber Eiszeitfunde des Vielfrasses in Oesterreich. Natur u. Land **37** (6) 1951 pp. 110–111. [N.V.]

1533.—Waldo, C. M. and **Wislocki,** G. B. Observations on the shedding of the antlers of Virginia deer (*Odocoileus virginianus borealis*). Amer. J. Anat. **88** 1951 pp. 351–395 5 pls. 8 figs.

Waldo, C. M. *vide* Aub.

1534.—Walker, E. P. Unusual pets that are readily tamed: "Flying" squirrels. Ill. Lond. News **218** 1951 pp. 302–303 11 photos.

1335.—Walker, L. W. The return of the Elephant Seal, with a strange story of parasitism. Burton, M. Story of Animal Life **2** 1949 pp. 323–326 5 figs.

1536.—Wallace, F. A national collection of big game trophies? Country Life **109** 1951 p. 1385.

1537.—Wallace, F. Experiments in feeding Red Deer. Country Life **110** 1951 p. 889 1 fig.

1538.—Wallace, F. Trophies in Paris. Field, Lond. **198** 1951 p. 289 5 figs. 1 tab.

1539.—Wallace, F. A policy for deer. Field, Lond. **198** 1951 pp. 458–459 4 figs.

1540.—Waller, S. Short-tailed Weasel and young in Manitoba. Canad. Field-Nat. **65** 1951 p. 120.

1541.—Walton, A. The effect of egg-yolk and its constituents on the respiratory activity of bull spermatozoa. Union Internat. Sci. biol. Paris Sér. B (Colloques) No. 3 1949 pp. 40–45 5 figs.

Wang, H. *vide* Smith.

1542.—Warburton, F. Notes on the vertebrates, except fishes, of the Sault Ste. Marie region of Ontario. Canad. Field Nat. **64** 1951 pp. 192–200.

1543.—Washburn, S. L. The analysis of primate evolution with particular reference to the origin of man. Cold Spr. Harb. Symp. Quant. Biol. **15** 1950 pp. 67–78 1 fig.

1544.—Washburn, S. L. and **Patterson,** B. Evolutionary importance of the South African 'man-apes.' Nature, Lond. **167** 1951 pp. 650–651.

1545.—Wassif, K. The anterior process and the ossification of the malleus in mammals. Science **113** 1951 pp. 486–487.

Watland, D. C. *vide* Humm.

1546.—Watson, J. M. The wild mammals of Teso and Karamoja—VI. Insectivora, Chiroptera, pp. 92–106. VII. Primates, pp. 193–202 1 pl. Uganda J. Kampala **15** 1951 pp. 92–106.

1547.—Watson, J. S. The Rat Problem in Cyprus. A report of investigations made in carob-growing areas. London (H.M.S.O. Col. Res. Publ. 9) 1951 pp. 66 8 pls. 16 figs.

1548.—Watt, G. The Farne Islands. Their history and wild life. London (Country Life Ltd.) 1951 pp. 236 frontis. 16 pls. 4 figs.

1549.—Watt, K. M. Mole as prey of sparrow-hawk. Country Life **109** 1951 p. 636.

1550.—Wautier, J. and **Domenjond,** C. Les souris a queue condee. Bull. Soc. linn. Lyon **20** 1951 pp. 36–45 4 figs.

1551.—Webber, A. For the hedgehog. Field, Lond. **198** 1951 p. 226.

Weddell, G. *vide* Zander.

1552.—Wedlake, A. L. Mammoth remains and Pleistocene implements found on the West Somerset coast. Proc. Somerset. archaeol. nat. Hist. Soc. **95** 1951 pp. 167–168.

1553.—Wegman, F. W. Vleermuizen ringen in Zuid-Limburg. Natura Amst. **48** 1951 pp. 18–20 2 figs.

1554.—Wegner, R. N. Der Tütenfortsatz (Processus cucullaris mandibulae) beim Elefanten, den Sirenen, Rhinozerotiden und Suiden. Anat. Anz. **98** 1951 pp. 66–82 12 figs.

1555.—Wegner, R. N. Unterschiede der Nasenlochgestaltung und des Os nariale bei den Saugetieren (Choloepus) und den Bauriamorphen. Verh. anat. Ges. Jena **48** 1951 pp. 104–111 7 figs.

1556.—Weidenreich, F. Morphology of Solo man. Introduction by G. H. K. von **Koenigswald.** Anthrop. Pap. Amer. Mus. Nat. Hist. **43** 1951 pp. 203–290 32 pls. 26 figs.

1557.—Weinert, H. Interprétation des récentes decouvertes de fossiles préhumains. Scientia, Bologna **86** 1951 pp. 71–75.

1558.—Weinert, H. Zur Frage des Gigantenproblems der Summoprimaten. Anat. Anz. **98** 1951 pp. 279–287 4 figs.

1559.—Welch, F. D. Melanism and altitude. Field, Lond. **197** 1951 p. 757.

1560.—Welch, F. D. When do Otters breed ? Field, Lond. **198** 1951 p. 342.

1561.—Welch, F. D. Why they turn white. Field, Lond. **198** 1951 p. 1002.

Weller, R. A. *vide* Gray.

1562.—Wells, L. J. Hormones and sexual differentiation in placental mammals. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 499–517 6 figs.

1563.—Wells, L. H. The fossil human skull from Singa, pp. 29–42 3 figs. In Fossil Mammals of Africa No. 2. The Pleistocene Fauna of Two Blue Nile Sites. Brit. Mus. (Nat. Hist.) 1951.

1564.—Wells, L. H. A large fossil klipspringer from Potgietersrust. S. Afr. J. Sci. **47** 1951 pp. 167–168 1 fig.

Wells, L. H. *vide* Cooke.

Werner, H. J. *vide* Dalquest.

Weston, S. M. *vide* Heriot.

1565.—Wettstein, O. Altersbestimmung bei Rehböcken. Oesterr. Weidwerk **2** 1951 pp. 13–14.

Wettstein, A. *vide* Benz.

1566.—Wheelwright, O. M. Lifespan of foxes. Field, Lond. **197** 1951 p. 438.

1567.—W(hite), E. I. Miss D. M. A. Bate. Nature, Lond. **167** 1951 pp. 301–302.

1568.—White, J. A. A practical method for mounting the bacula of small mammals. J. Mammal. **32** 1951 p. 125.

1569.—White, S. R. Observations on the fat-tailed dunnart in captivity. W. Aust. Nat. **3** 1951 pp. 1–6 4 figs.

1570.—Whitehead, G. K. Deer stalking in 1950. Field, Lond. **197** 1951 pp. 271–272 4 figs.

1571.—Whitehead, G. K. The West's record stag. Field, Lond. **197** 1951 pp. 593–594 4 figs. tables.

1572.—Whitehead, G. K. A law to protect deer. Field, Lond. **198** 1951 pp. 377–378 4 figs.

1573.—Whitehead, G. K. The Broome Park head. Field, Lond. **198** 1951 p. 472.

1574.—Whitehead, G. K. Wild cattle in Wales. Field, Lond. **198** 1951 pp. 980–981 4 figs.

1575.—Whitehead, G. K. White cattle from Chartley. Field, Lond. **198** 1951 pp. 1058–1059 3 figs.

1576.—Whitehead, G. K. A record British wild stag. Country Life **109** 1951 pp. 619–621 6 figs.

1577.—Whitehead, G. K. Plan to bring back the reindeer. Country Life **110** 1951 pp. 1450–1452 4 figs.

1578.—Whitlock, J. H. The evaluation of animal growth. Cornell Vet. **41** 1951 pp. 254–266 3 figs.

1579.—Whitlock, R. An albino badger. Field, Lond. **198** 1951 p. 909 1 fig.

1580.—Whitlock, R. Zoological Section. Mammals. Pap. Hamps. Fld. Cl. **16** 1947 pp. 294–295 **17** 1949 p. 96.

1581.—Wilber, C. G. Fat metabolism in Arctic as compared with temperate zone mammals. Bull. nat. Res. Coun. Wash. No. 122 1951 pp. 88–89.

Wilke, F. *vide* Austin.

1582.—Willan, R. L. and **Smith,** C. A. M. On an island breeding place of the Atlantic grey seal. Ill. Lond. News **218** 1951 pp. 950–951 figs.

Williams, E. *vide* Fuller.

1583.—Williams, E. E. and **Koopman,** K. F. A new fossil rodent from Puerto Rico. Amer. Mus. Novit. No. 1515 1951 pp. 1–9 2 figs.

Williams, E. E. *vide* Koopman.

1584.—Williams, J. H. Measuring an elephant. Field, Lond. **197** 1951 p. 836.

1585.—Williamson, V. H. H. Determination of hairs by impressions. J. Mammal. **32** 1951 pp. 80–84 2 figs.

1586.—Wilmink, G. F. Ondergrondse woelmuis en aardmuis ob Zuid-Beveland ? Levende Nat. **54** 1951 pp. 99–100 1 map.

1587.—Wilson, R. W. Preliminary survey of a Paleocene faunule from the Angels Peak area, New Mexico. Publ. Univ. Kans. Mus. Nat. Hist. **5** 1951 pp. 1–11 1 fig.

1588.—Wilson, R. W. Evolution of the Early Tertiary rodents. Evolution **5** 1951 pp. 207–215 1 fig.

1589.—Windlè, W. F. Reflexes of mammalian embryos and fetuses. Union Internat. Sci. biol. Paris Sér. B (Colloques) No. 6 1950 pp. 214–222.

1590.—Wing, L. W. Practice of Wildlife Conservation, New York and London (Chapman & Hall) 1951 pp. xi + 412 frontis. 57 figs.

1591.—Wingstrand, K. G. The mountain fauna of the Várihaure area in Swedish Lappland. II. Special account Vertebrata. Acta Univ. lund. N.S. **46** 2 1951 pp. 6–8.

Wingstrand, K. G. *vide* Hanstrom.

Wislocki, G. B. *vide* Aub.

Wislocki, G. B. *vide* Waldo.

1592.—W., J. D. U. What is a badger ? Country Life **110** 1951 p. 1718 1 fig.

Wodzicki, K. *vide* Bassett.

1593.—Wolbach, S. B. The hair cycle of the mouse and its importance in the study of sequences of experimental carcinogenesis. Ann. N.Y. Acad. Sci. **53** 1951 pp. 517–536 19 figs.

1594.—Wolf, H. Zur Kenntnis der Saugetierfauna Bulgariens. Mitt. naturw. Inst. Sofia **13** 1940 pp. 153–168 3 figs.

1595.—Wolff-Exalto, E. A. de. On differences in the lower jaw of animalivorous and herbivorous mammals. I. pp. 237–246, II. pp. 405–410 4 figs. Proc. K. ned. Akad. Wet. **54C** 1951.

1596.—Wolfgang, R. W. Studies on the endoparasitic fauna of Trinidad mammals. VIII. Parasites of Marsupials. Canad. J. Zool. **29** 1951 pp. 352–373 46 figs.

1597.—Woloyche-Whitmore, G. C. Fencing against rabbits. Quart. J. For. **45** 1951 pp. 47–49 1 pl.

1598.—Wood, A. E. A new Geomyid rodent from the Miocene of Montana. Ann. Carnegie Mus. **31** 1950 pp. 335–358 1 fig.

1599.—Woodcock, A. H. and **McBride,** A. F. Wave-riding dolphins. J. exp. Biol. **28** 1951 pp. 215–217.

1600.—Wood-Jones, F. The external characters of a foetal Tarsier. Proc. Zool. Soc. Lond. **120** 1951 pp. 723–730 10 figs.

1601.—Wood-Jones, F. A contribution to the history and anatomy of Père David's Deer (*Elaphurus davidianus*). Paleontology, pp. 333–335. Anatomical characters, pp. 335–336.

The brain of the neonatus, pp. 364–366. Proc. Zool. Soc. Lond. **121** 1951 pp. 319–369 6 pls. 48 figs.

1602.—Woodman. Deer at large. Country Life **109** 1951 p. 2050 2 figs.

Woodville, H. C. *vide* Harrison.

1603.—Worth, C. B. Indirect evidence supporting observations on the range of wild rodents. J. Mammal. **32** 1951 pp. 76–79 2 figs.

1604.—Worthington, E. B. The scientific problem of game control and preservation. Afr. Region Sci. Conf. **1949** 2 [1950] p. 230.

1605.—Wotton, R. M. and **Village,** P. A. The transfer function of certain cells in the wall of the Graafian follicle as revealed by their reaction to previously stained fat in the cat. Anat. Rec. **110** 1951 pp. 121–127 1 pl.

1606.—Wrete, M. Ganglia of rami communicantes in man and mammals particularly monkey. Acta Anat. **13** 1951 pp. 329–336 1 fig. 1 tab.

1607.—Wright, B. S. A walrus in the Bay of Fundy; the first record. Canad. Field Nat. **65** 1951 pp. 61–64 3 figs.

Wright, G. M. *vide* Rendel.

1608.—Wright, N. P. Sea-lion island. Zoo Life, Lond. **6** 1951 pp. 94–97 5 figs.

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1610.—Wyatt-Smith, J. L. A bat eating a bird. Malay. Nat. J. **5** 1951 pp. 208–209.

1611.—Wynter-Blyth, M. A. The Indian Lion. Oryx **1** 1951 pp. 99–101.

Wynter-Blyth, M. A. *vide* Dharmakumarsinhji.

Xylander, E. v. *vide* Vietinghoff-Riesch.

1612.—Yabe, H. Controversies relating to the Kuzi Proboscidean molars. Proc. Japan Acad. **26** 1950 pp. 29–35.

1613.—Yabe, H. Three alleged occurrences of *Stegolophodon latidens* (Clift) in Japan. Proc. Japan Acad. **26** 1950 pp. 61–65 5 figs.

1614.—Yalçinlar, I. Les vertébrés fossiles du Miocene dans la vallée du Gediz-Superieur. Bull. Geol. Soc. Turkey **1** 1 1947 pp. 164–177 figs.

1615.—Yalçinlar, I. Les vertébrés du Miocène supèrieur à l'Est de Kayseri (Turquie). Rev. Fac. Sci. Univ. Istanbul **15B** 1950 pp. 264–268 1 map.

1616.—[Yanuskko, P. A.] [Observations on the biology of *Marmota menzbieri* Kasch.] Zool. J. Moscow **30** 1951 pp. 629–635 4 figs. [In Russian.]

1617.—Yarham, E. R. Saving the Musk-ox from extinction. Zoo Life, Lond. **6** 1951 pp. 68–72 4 figs.

1618.—Yates, F. and **Healy,** M. J. R. Statistical methods in anthropology. Nature, Lond. **168** 1951 pp. 1116–1117.

Yeager, L. E. *vide* Kinghorn.

1619.—Yerkes, R. M. Gorilla census and study. J. Mammal. **32** 1951 pp. 429–436.

You, S. S. *vide* Sellers.

1620.—Young, C.-C. The Plio-Pleistocene boundary in China. 18th Rep. Int. Geol. Congress **9** 1950 pp. 115–125.

Young, J. Z. *vide* Fernand.

1621.—[Yourgenson, P. B.] [Ecological-geographical aspects in nutrition of *Martes martes* L. and geographical variation of the ecological-morphological masticatory adaptations.] Zool. J. Moscow **30** 1951 pp. 172–185. [In Russian.]

Yudin, K. A. *vide* Stroganova.

1622.—Zander, E. and **Weddell,** G. Observations on the innervation of the cornea. J. Anat. Lond. **85** 1951 pp. 68–99 6 pls. 2 figs.

1623.—Zapfe, H. Die Fauna der miozänen Spaltenfüllung von Neudorf an der March. Carnivora. Anz. öst. Akad. Wiss. **87** 1951 pp. 311–312.

1624.—Zapfe, H. Die Fauna der miozänen Spaltenfüllung von Neudorf a. d. March (CSR.). Insectivora. S.B. öst. Akad. Wiss. (1) **160** 1951 pp. 449–480 15 figs.

1625.—Zapfe, H. Ein Geweihrest aus dem unterpliözanen Susswasserkalk des Eichkogels bei Mödling. Anz. öst. Akad. Wiss. **88** 1951 pp. 135–141 fig.

1626.—Zapfe, H. *Dinocyon thenardi* aus dem Unterpliozän von Drassburg im Burgenland. S.B. öst. Akad. Wiss. Abt. I **160** 1951 pp. 227–241 9 figs.

Zbyszewski, G. *vide* Bergounioux.

1627.—Zeek, P. M. Double trachea in penguins and sea lions. Anat. Rec. **111** 1951 pp. 327–343 5 figs.

1628.—Zei, M. M. Sopra una nuova specie di *Eurhinodelphis* della pietra leccese. R.C. Accad. Napoli (4) **17** 1950 pp. 190–200 1 pl. 5 figs.

1629.—Zeuner, F. E. The Cat. Oryx **1** 1951 pp. 65–71.

1630.—Zimmermann, Á. *Musculus interflexorius.* Acta Biol. Hung. **1** 1950 pp. 147–163.

1631.—Zimmermann, K. Über Harzer Kleinsäuger. Bonn. zool. Beitr. **2** 1951 pp. 1–8 1 fig.

1632.—Zippelius, H. M. and **Goethe,** F. Ethologische Beobachtungen an Haselmäusen (Muscardinus a. avellanarius L.). Z. Tierpsychol. **8** 1951 pp. 348–367 22 figs.

1633.—Zuckerman, S. The dentition of the Australopithecinae. Man **51** 1951 p. 32.

1634.—Zuckerman, S. The histogenetic potency of the cloacal region. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 608–617.

1635.—Zuckerman, S. Perspective in the study of sexual differentiation. Arch. Anat. micr. Morph. exp. **39** 1951 pp. 618–626.

Zuckerman, S. *vide* Ashton.

Zuckerman, S. *vide* Eckstein.

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†*Pseudoneothoracophorus* see *Pseudothoracophorus*.

†*Pseudothoracophorus* **gen. nov.** for type species *P. depressus* (Ameghino) p. 69, CASTELLANOS Rev. Asoc. Geol. Argent. **6** 1 1951 (misspelt *Pseudoneothoracophorus* p. 66).

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†*Ritteneria* **gen. nov.** p. 131, 357, for type species *R. manca* **sp. nov.** p. 132, 357, Miocene, La Chaux (Waadt.), Switzerland, STEHLIN and SCHAUB, Schweiz. Pal. Abhandl. **67** 1951.

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†*Issiodoromys terminus* **sp. nov.** Oligocene, Gosgen, Switzerland, pp. 72, 364, STEHLIN and SCHAUB **1379**.

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†*Theridomys* (*Oltinomys* **subgen. nov.**) for type species *T. platyceps* Filhol, STEHLIN and SCHAUB, Schweiz. Pal. Abhandl. **67** 1951 pp. 37, 363.

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ERRATUM

In the 1950 Record, *Lutreola lutreola borealis* Novikov 1939 was erroneously attributed to Sludski 1950.